APRIL 1955
35c 40 CENTS IN CANADA

Homecraft

FEB 23 1955
124034

FULL SIZE PLAN
for standing picture frame

TABLE LAMP
from tree stump

PROFIT FEATURE
Linoleum block art

CONVERTIBLE DESK
of extra-purpose design

3-WAY MIRROR
for your bathroom

PROFIT FEATURE
Projects in plastics

SERVING TRAY
with hand carved design

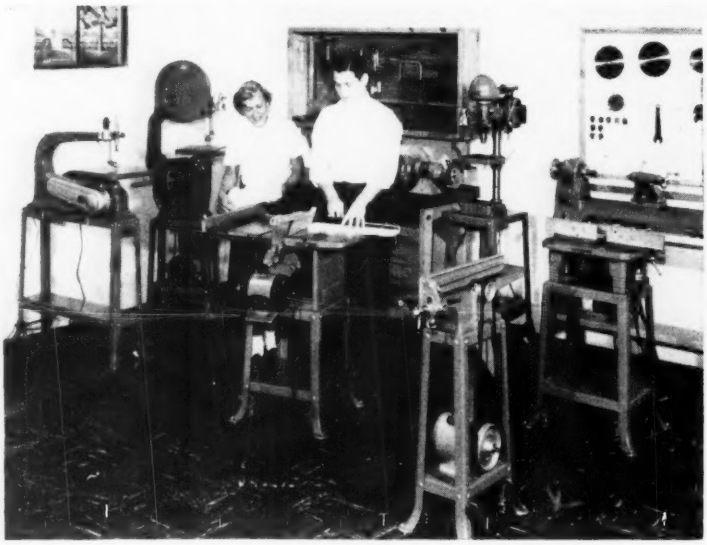
FURNITURE
End table—Tier table
Smoking stand

DOG HOUSE
of barrel design

Make EXTRA MONEY at home doing ELECTROPLATING!

Win up to $1000 Worth of Fine DELTA Power Tools

in Delta Users' "Finest Home Workshop" Contest!



A Contest to Discover The Best Home Workshop Use of the finest Power Tools Made Today

HERE ARE SOME OF THE DELTA POWER TOOLS YOU CAN WIN

COMPLETE PRIZE LIST

1st PRIZE

$1000 worth of Delta Power Tools and accessories of your choice.

2nd PRIZE

$750 worth of Delta Power Tools and accessories of your choice.

3rd PRIZE

$500 worth of Delta Power Tools and accessories of your choice.

4th PRIZE

$250 worth of Delta Power Tools and accessories of your choice.

PLUS: Ten honorable mention certificates, each worth $10 in Delta Power Tools or accessories.

Nothing to Buy

If you own three or more Delta Power Tools, you can win up to $1000 merely by sending us a picture of your shop, and telling, in your own words, why you like Delta tools. There's nothing to buy, no red tape.

Easy to Enter

Here's all you do to compete for the big first prize ($1000 worth of Delta tools) and fourteen other valuable power tool prizes:

1. Get an official entry form, either from your Delta Dealer, (listed under "TOOLS" or "MACHINERY" in the classified pages of your phone book) or by sending the coupon on this page.
2. In not more than 150 words, complete this statement: "I like Delta Power Tools because . . . ." No fancy writing needed. Just tell us, in your own words, why you like your Delta Tools.
3. Take a picture of your workshop. Use your own flash equipment, or borrow a friend's. Pictures will not be judged on professional photographic skill, but on practical arrangement for most efficient use of available space. Tell us about any special features of your shop in a note pasted on the back of your shop photo.
4. Mail entry form, statement, and photo to: Contest, Delta Power Tool Division, Rockwell Manufacturing Co., Pittsburgh 8, Pa.

Easy to Win

Remember, you don't have to have an expensive shop to win this contest. Entries will be judged on the common sense you've shown in selecting and using your tools, and on your ingenuity in utilizing available shop space efficiently.

Here are the complete contest rules:

- Contestants must live in the United States or Canada, and own three or more individual Delta Power Tools, or a complete DeltaShop (Delta's one-motor combination of the four basic power tools—saw, jointer, drill press and sander).
- Employees of The Rockwell Manufacturing Company or its advertising agency, or members of their families, are not eligible to compete.
- Entries must be on or accompanied by an official entry form. Elaborate or "dressed up" entries will be discarded.
- Contest closes July 15, 1955. Entries must be postmarked on or before that date.
- Winners will be notified by mail on or before November 1, 1955. Complete list of winners will be supplied on request.
- Decision of judges is final. In case of ties, duplicate awards will be made.
- All entries become the property of Rockwell Manufacturing Company, and none will be returned.
- Awards will be in the form of certificates redeemable at authorized Delta Dealers in Delta Power Tools and accessories up to the face value of the certificate.

Get Your Entry Blank NOW!

If you own three or more Delta Tools, you have as good a chance as anyone to win $1000 worth of additional Delta Tools, or any one of the other fourteen valuable Delta Power Tool and accessory prizes. So get started now! Get your entry form today!

Delta Power Tool Division, Rockwell Manufacturing Company 508C
Pittsburgh 8, Pa.

☐ Please send me an an official entry blank for the Delta Users' "FINEST HOME WORKSHOP" Contest.

Name _____

Address _____

City _____ Zone ____ State _____

DELTA QUALITY POWER TOOLS

Another Product by **Rockwell**

DELTA QUALITY COSTS NO MORE

FEB 23 1955

THE *First* PRACTICAL
POWER TOOL WORKSHOP

5 full size Power tools

1 motor runs them all!

10 second motor changeover

The biggest workshop Value ever offered!

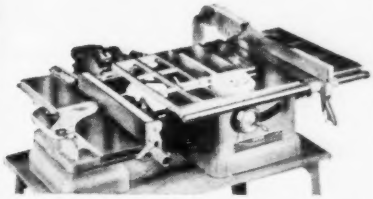
Think of it, 5 *full size, professional quality, individual* power tools—all operated from one motor and priced low enough to fit any budget! The *secret* of this revolutionary power tool idea lies in an exclusive Duro development—*the "quick change"* motor mount. It permits you to bring the motor to each tool — quickly, easily — *in a matter of seconds!*

You can now do woodworking operations the correct, safe way, at convenient heights, without interference from other tools, without sacrificing speed, efficiency and accuracy. There's no need for knocking down and setting up tools; all units remain pre-set for immediate operation. You save time and bother in making adjustments, changing guides, attachments and cumbersome tool positioning. *Most important*, the Duro Master workshop can be started with any single unit or combination of units to suit your particular need and budget. *You buy only what you need when you need it.*

WRITE FOR 16 PAGE CATALOG giving full details, specifications and prices on this complete DURO MASTER WORKSHOP of 5 basic units and 5 optional tools. It will pay you to investigate! Learn the full story of the remarkable "quick change" motor mount, the exclusive operating features and the new "budget" plan purchasing idea. Write today — now.

DURO METAL PRODUCTS CO. 2658 N. KILDARE AVENUE • CHICAGO 39, ILL.

Build a power tool shop a unit at a time!



The Duro Master "Budget Buying" plan enables you to invest in a power shop to suit your needs and budget. A handy starter unit around which to build *your* shop can be this versatile 4½" jointer—8" tilting arbor saw combination. Both units for only $105.70. Or, you can begin with a drill press, sander, circular saw, jig saw, band saw or any combination of tools. Each unit can be equipped with the "quick change" motor mount and can be operated individually from one motor. An exclusive feature no other shop can offer!

DURO METAL PRODUCTS CO.
2658 N. Kildare Avenue, Chicago 39, Ill.

Gentlemen: Please rush me your FREE 16 page booklet on the new DURO MASTER WORKSHOP.

Name_____

Address_____

City and State_____

The Mark of Quality in *Fine Swedish* WOOD CHISELS

For fine hand work, look for the Gensco Diamond on the wood chisels you use. Be assured of steel that takes and holds a "razor" edge—unbreakable Tenite II handles—tang type blades that don't lose their handles (sizes marked in top)—and better workmanship on every job for which you use them.

AVAILABLE IN MATCHED SETS

Get your set of Gensco Swedish wood chisels in the heavy, vinyl coated canvas roll. 4, 6 or 11 piece chisel sets.

GENSCO BOW SAWS

The fastest cutting saw you've ever used. Every home needs one for rough work, cutting firewood, logs, tree pruning or camping.

Sold by Leading Retail Stores

GENSCO

GENSCO TOOLS
A DIVISION OF
GENERAL STEEL WAREHOUSE CO., INC.
1842 North Kostner Avenue, Chicago 39, Illinois

Homecraft AND THE HOME OWNER

Volume 25 No. 4
Whole No. 156

(Formerly Popular Homecraft)

Contents for MARCH - APRIL 1955

Fix-It-Yourself ..... Perry S. Graffam 198
It's New on the Market 208
Electroplating in the Home Workshop .. Alice R. Shannon 212
Linoleum Block Art ..... Robert F. Burgess 215
Simple Stand Frame (FULL SIZE PLAN) ..... Dick Hutchinson 216
St. Paul Man Carves 300 Wooden Horses ..... Ken Berglund 218
Don't Let This Lamp Project Stump You! ..... Elma Waltner 219
Does Your Garden Need A Walk? ..... George D. Young 220
Convertible Desk ..... William Dye 222
Three-Way Bathroom Mirror ..... Anna L. Minici 225
So You Are Going To Buy A Garden Tractor? ..... Archer P. Whallon 227
Plastics—Useful As Well As Ornamental ..... Hallie Holmes 229
Drill Press Vise ..... C. W. Woodson 231
From Wrought Iron Fence to Patio Table ..... Walter L. Harter 232
Heavy Duty Boring Bar ..... C. W. Woodson 233
Spring Center ..... C. W. Woodson 233
Hand Carved Serving Tray ..... Dick Hutchinson 234
Smoking Stand DeLuxe ..... Dick Hutchinson 236
Signpost of Distinction ..... Warner G. Tilsher 238
How to Make a Lawn Roller ..... Raymond Schuessler 242
Barrel-Type Dog House ..... Raymond Schuessler 243
Mahogany End Table ..... Robert D. Wray 244
Tier Table and Smoking Stand ..... D. C. Marshall 246
Story Without Words ..... Fred C. McPhearson 248
Sanding Table Attachment ..... R. Kielsmeier 249
Home Owners' Shopping Column 252

Our 25th Year

Homecraft & The Home Owner is a national publication for the professional, school and home workshop as well as a guide to home repair, maintenance and improvement. Application is made for transfer of Second Class Entry to the postoffice at Mount Morris, Ill. Printed in U.S.A.

Copyright 1955 by General Publishing Co., Inc. All rights reserved.

Subscription rates: U.S.A.—35c per copy; $2.00 a year; 2 years, $3.50; 3 years, $4.50; Canada—$2.25 a year; Foreign—50c a year extra. Requests for changes of address should include both the old and new address. The editors are always glad to receive authoritative homecraft articles from readers. Send manuscripts, photos, and drawings to Russell C. Johns, Homecraft & The Home Owner, 154 East Erie St., Chicago 11, Ill. All articles will be acknowledged and paid upon publication, but the return of unsolicited matter cannot be guaranteed. All manuscripts and correspondence should be addressed to the executive offices at Chicago, Illinois and should include return postage.

L. F. McCLURE
President

RUSSELL C. JOHNS
Editor & Publisher

FRANK CULHANE
Associate Editor

DICK HUTCHINSON
Associate Editor

PERRY S. GRAFFAM
Associate Editor

FRANK HEGEMEYER
Associate Editor

WALT DURBAHN
Associate Editor

F. OTIS PHAGANS
Contributing Editor

P. A. PHILIPPI
Circulation Director

Published every other month at 404 N. Wesley Ave., Mount Morris, Ill.

MAIN OFFICE
154 East Erie St.
Chicago 11, Ill.
Phone DElaware 7-3605

SALES OFFICES
Donald H. Dennett
161 E. Grand Ave.
Chicago 11, Illinois
WHitehall 3-2048

Wilson & Stark
40 E. 50th St.
New York City
Phone MUryhil 8-0467

C. L. Matthews
340 W. Allens Lane
Philadelphia, Pa.
Phone CH-70547

MEMBER AUDIT BUREAU OF CIRCULATIONS

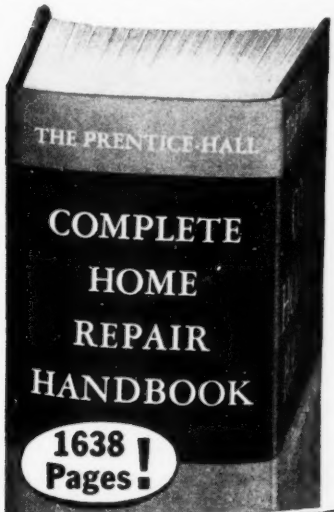
LAST CHANCE FOR READERS OF HOMECRAFT & HOME OWNER

30-DAY TRIAL
without risk or obligation

One month from today this tremendous volume—the most amazing book bargain ever offered home owners—will be broken up—and published as 8 complete books, each selling at $3.95. Think of it—8 complete books—$31.60 worth—all here in one huge volume for only $7.50! And you don't pay even a penny before you see the book, and use it on your own home repairs and home improvements!

You undoubtedly have seen our ads on this "Complete Home Repair Handbook" in Homecraft and The Home Owner magazine before.

And perhaps you have always intended to send for a Free-Examination copy, but for one reason or another, never quite got around to it. DON'T PUT IT OFF ANY LONGER! Once our limited supply of the one-volume edition is gone, you won't be able to get this huge home repair library for less than $31.60. But if you act right now, you can still get your copy for only $7.50 . . . a clear saving of $24.10! Mail the coupon below, NOW.



SAVE $24.10 ON THE FAMOUS PRENTICE-HALL

COMPLETE HOME REPAIR HANDBOOK

GIANT 8-VOLUMES-IN-ONE HOME REPAIR LIBRARY • OVER 1500 ILLUSTRATIONS

These are Typical of the Savings YOU Can Make:

- **Creaky Stair Treads replaced for $1.00 instead of $15.00!**
- **Pipe Leak repaired for 5¢ instead of $3.00!**
- **Kitchen Cupboards built for under $25 instead of $250!**
- **Screens & Stormsash built for $70 instead of $180!**
- **Wall Switch installed or replaced for $1.75 instead of $7.50!**
- **Reupholstering Sofa & Chair for $10 instead of $125!**
- **Driveway constructed for $75 instead of $200!**
- **Outdoor Fireplace built for $45 instead of $150!**
- **Vacuum Cleaner repaired for $1.65 instead of $10!**

COMPARISON PROVES THIS NEW GIANT VOLUME IS BEST OF ITS KIND AVAILABLE TODAY

See how leading home repair volumes compare in 20 important features that mean money-saving, time-saving, work-saving for you:

FEATURES	THIS BOOK	BOOK "A"	BOOK "B"
Use of Power Tools	Complete	Nothing	Incomplete
Electrical Appliance Repairs	Complete	Incomplete	Very little
Furniture Upholstery	Complete	Nothing	Nothing
Pest Control	Complete	Nothing	Nothing
Termite Control	Complete	Nothing	Nothing
Motor Maintenance	Complete	Nothing	Nothing
Insulation Materials and Procedures	Complete	Nothing	Incomplete
Septic Tanks	Complete	Nothing	Very little
Glass Brick	Complete	Very little	Nothing
Foam Rubber	Complete	Nothing	Nothing
Plywood	Complete	Incomplete	Incomplete
Wallboard	Complete	Incomplete	Incomplete
Spray Guns	Complete	Nothing	Nothing
Color Harmony	Complete	Nothing	Nothing
Air Conditioning	Complete	Nothing	Incomplete
Vapor Barriers	Complete	Nothing	Incomplete
Radiant Heating	Complete	Incomplete	Incomplete
Garbage Disposal Equipment	Complete	Nothing	Nothing
Asphalt Tile	Complete	Very little	Incomplete
Home Workshop	Complete	Nothing	Nothing

THE WORLD'S GREATEST BUILDING AUTHORITIES CONTRIBUTED EXPERT DATA FOR THIS MAMMOTH VOLUME

Professional methods recommended for best results in repair and maintenance of your home were contributed by:
Anaconda Brass
Armstrong Cork Company
Asphalt Roofing Industry Bureau
American Steel & Wire
American Structural Products Company
Black & Decker Mfg. Co.
Brown & Sharpe Mfg. Co.
Bendix Home Appliances, Inc.
Cornell University
Copper & Brass Research Association
Crane Company
Henry Disston & Sons, Inc.
Delta Power Tool Division—Rockwell Manufacturing Co.
E. I. du de Nemours & Company, Inc.
Devoe & Raynolds Company, Inc.
Delco Appliance Division—General Motors Corporation
General Electric Company
Institute of Boiler and Radiator Mfrs.
S. C. Johnson & Son, Inc.
Johns-Manville
Minneapolis-Honeywell Regulator Company
Norge Division—Borg-Warner
Nicholson File Company
Portland Cement Association
Pittsburgh Plate Glass Company
Philco Corporation
Stanley Tools
L. S. Starrett Company
Toastmaster Products
United States Rubber Company
United States Plywood Corp.
United States Steel
U. S. Gypsum Corporation
Victor Electric Products
Wall Paper Institute
Yale & Towne Manufacturing

Here is just a glimpse at the contents of this giant Handbook:

INTERIOR REPAIRS. How to repair sagging floors—How to fill cracks in floors—Laying linoleum—How to fit and hang doors—Replacing sash cords—Applying weather stripping—How to repair lamp sockets—How to replace electric switches—How to repair electric motors—Repairing leaks in piping—Eliminating noises in plumbing and heating system—Draining plumbing system—Repairing loose, cracked or bulging plaster—Replacing wall and floor tile—Waterproofing basement walls and floors—Removing old wallpaper—Painting and Paperhanging.

EXTERIOR MAINTENANCE & REPAIRS. How to locate and repair leakage points on roofs—Re-roofing procedures—Shingling—Roll roofing—Repairs to gutters and leaders—Inspection and cleaning of septic tank—Patching cracks in concrete walks and walls—Removal of stains from concrete or brick—Exterior painting—How to avoid blistering, cracking, flaking, alligatoring, scaling, wrinkling on exterior paint jobs.

FURNITURE UPHOLSTERY & REPAIRS. How to replace defective stuffing, springs, webbing—How to pad seats—How to make cushions—Foam-rubber upholstering—Repairing broken spindles, rails, legs—Correcting sticky drawers—How to repair scratches, dents and nicks—Furniture refinishing.

HOME IMPROVEMENTS & APPLIANCES. Remodeling basements and attics—Constructing porch screens, storm doors and windows—Building a stairway closet—Constructing garden furniture, fences, gates, pergolas, trellises—Installing three-way push button electrical switch—Installing cooler fans in windows—Air conditioning systems—Automatic coal stoker—How to check and repair electric iron, toaster, ironer, range, vacuum cleaner, dishwasher, refrigerator, oil burner—Laying a cement or concrete floor—Building concrete sidewalks, driveways, outdoor fireplace.

WOODWORKING HAND TOOLS & MATERIALS. How to use handsaws, screwdrivers, planes, chisels and gouges, braces and bits, scrapers, squares, levels, clamps, sharpening tools—How to identify and properly use woods and wood products—Working with wood—How to make woodworking joints—Glues and gluing methods.

METALWORKING HAND TOOLS & MATERIALS. Metalworking saws, hammers, twist drills, files, pliers and nippers, wrenches, snips and shears, cold chisels, taps and dies, soldering irons, vises—Bending and forming metal—Treating and finishing metal—Fasteners for metal work.

WOODWORKING POWER TOOLS. Proper use, checking, adjusting and maintenance of wood-turning lathe, circular saw, band saw, jig saw, drill press, jointers and shapers, sanders, power tool accessories—Cutting miters—Bead cutting—Multiple cutting—Cutting rabbets and dados – Making dovetail joints – Matched shaping – Tonguing and grooving—Reeding and fluting.

METALWORKING POWER TOOLS. Operation and maintenance of engine lathe, drill press, portable electric hand drill, power tool accessories—Roughing cuts—Finishing cuts—Facing—Boring—Taper turning—Knurling—Thread cutting—Drilling sheet metal—Countersinking—Commutators and carbon brushes.

PLUMBING & HEATING MATERIALS. Proper use and maintenance of all types of plumbing tools—Roughing-in materials—Determining sizes of house drains—Fittings—Selecting correct pipe size—Plumbing fixtures—Heating systems, hot-water, steam, warm air—Stokers—Oil burners—Chimneys and drafts—Automatic heating controls—Domestic water heaters—Radiators and convectors—Radiant heating.

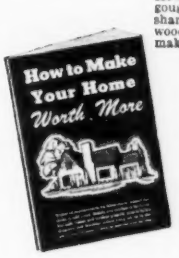
ELECTRIC MATERIALS. Circuits – Outlets – Indoor and Outdoor Approved Wiring Materials—Batteries—Transformers—Tools—Splicing—Methods of interior wiring—Remote-control wiring system—Use and repair of motors—Code requirements.

CONCRETE, PLASTERING, MASONRY. Methods of mixing concrete—Placing or pouring concrete—Cold-weather procedures – Watertightness – Composition and application of stucco – Bricklaying – Concrete blocks – Glass bricks or blocks—Plastering materials and procedures—Plaster cracks—Prepared gypsum finishes.

ALSO PAINTING & DECORATING. TERMITE & PEST CONTROL. HOME INSULATION.

$31.60 VALUE—AT ONE-FOURTH THE PRICE! The 8 big sections in separate volumes will cost $3.95 each, a total of $31.60 for the entire set. But if you act at once—while supply lasts—the single-volume edition can be yours for only $7.50. Pay small monthly installments shown in coupon below—AFTER YOUR FREE EXAMINATION proves you want to keep it.

AMAZING 30-DAY TRIAL OFFER! YOU TAKE NO RISK WHATSOEVER! SEE DETAILS IN COUPON BELOW.



FREE

EXTRA GIFT FOR PROMPTNESS

As an added inducement for mailing the coupon immediately, we offer you ABSOLUTELY FREE a copy of the practical book **"How to Make Your Home Worth More."** Tells you dozens of ways to make your home safer, more comfortable, more saleable. **Includes attic and basement remodeling; window, door, and porch screening; picket fences; gates and pergolas; driveways; flagstone walks; ornamental concrete projects and many, many more. Yours entirely without charge—merely for examining the sensational new, illustrated COMPLETE HOME REPAIR HANDBOOK. Just mail the coupon at once!**

Prentice-Hall, Inc., Dept. M-HH-335
Englewood Cliffs, New Jersey

30-DAY TRIAL COUPON *Fill in and Mail Now*

Prentice-Hall, Inc., Dept. M-HH-335
Englewood Cliffs, New Jersey

Please send me THE COMPLETE HOME REPAIR HANDBOOK for FREE EXAMINATION AND TRIAL. Within 10 days I will either return the book and owe nothing or send you $2.50. I will then send you $2.50 a month until special price of $7.50, plus postage and packing, is paid. SPECIAL "NO RISK" OFFER: Any time within 30 days after making initial payment I may still return the Handbook and you will refund my payment.

ALSO SEND FREE the new book "How to Make Your Home Worth More"—mine without cost, whether I keep the COMPLETE HOME REPAIR HANDBOOK or not.

Name .....

Address .....

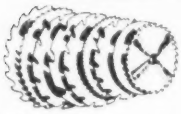
City ..... Zone ..... State .....

SAVE MORE: Send full amount, of $7.50 with this coupon and we will pay postage and packing charges on this 4-lb. shipment. Same return privilege—your money back if not satisfied.

QUALITY TOOLS FOR EVERY CRAFTSMAN

Direct from Distributor to You!

Surplus Tempered Steel CIRCULAR SAW BLADES



Reg. to $4.95 ea.

NOW ONLY **99c** *ea.*

(plus 20c each blade to cover P.P. and handling)

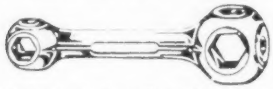
CROSS CUT • RIP • COMBINATION

Not just ordinary, imported blades, but top quality heavy gauge tempered tool steel blades designed especially for long rugged use, and made right here in America. Available in 6", 7" and 8" diameter with ½" and ⅝" bores to fit all popular makes of hand, power and table saws. Will fit: SKIL, SHOPSMITH, STANLEY, BLACK & DECKER, MALL, DELTA, DEWALT, CRAFTSMAN and hosts other equipment.

10" RIP, CROSS CUT or COMBINATION CIRCULAR BLADES—⅝", ¾" bore. Reg. $5.50. OUR PRICE ..... *$1.59 Postpaid*

When ordering specify equipment name, blade and bore size.

10 WAY UTILITY WRENCH



One of the handiest tools you'll ever buy! Has 10 popular 6 pt. openings from ¼" to 9/16". Solid, sturdy construction. Cadmium plating guarantees against rust and insures long life. Only 4" long yet fits 95% of all nuts and bolts in home and car.

Reg. $1.25 NOW ONLY **59c** ppd.

10" CARBIDE-TIPPED CIRCULAR SAW

New design of the Branch Innovation blade saw. Swats safely, can't kick back at you. Carbide tipping means 20 times the action of ordinary steel blades—cuts with or across grain in wood, also plastics, plywood, aluminum, asbestos, everything except steel and masonry. In ⅝" and 1" bores only, please—pretty which.

Reg. $12.95 NOW **$6.95** *Plus 30c handling-postage*

Evans "White Steel Tape"

100 ft. —*Reg. $12.60* *Our Price* **$6.95** *plus 35c handling and postage*

Bold jet black numerals on snow white high carbon steel, hardened and tempered. Bonderizing guarantees enamelling against cracking and peeling. Five numbers at every inch for quick easy reading! Anti backlash winding double-rolled countersunk heavy leather strap. Du Pont vinyl resists moisture, scuffing and stains! Unconditionally guaranteed.

KEUFFEL AND ESSER

WYTEFACE STEEL TAPE

50 ft. *Reg. $7.50* *Our Price* **$4.35** *plus 35c handling and postage*

Same features as above plus foot markings in red at every inch.

29-Piece Chrome Vanadium DRILL SET

Especially made for speed drilling. In sturdy indexed container. Finest alloy steel drills, hardened and precision ground to the sharpest, longest-lasting cutting edges obtainable; will easily and cleanly bite through hardwoods, plastics, aluminum, iron, and the toughest steels. Unconditionally guaranteed for thousands of drillings. Full jobber—length. Sizes by 64th from 1/16" to ½".

Reg. $15.95 *Now* **$6.95** *Plus 50c handling-postage*

6-Pc. POWER AUGER BIT SET

Made of finest tool steel specially tempered and hardened to give years of quick, clean, easy drilling. Shanks will fit all electric drills. Packed in sturdy heat treated, compartmented plastic tool roll. Sizes ⅜", ½", ⅝", ¾" and 1". **$2.29** *ppd.*

Magnetic WALL STUD FINDER

This scientifically designed Magnetic Wall Stud Finder tells you instantly where to hang pictures, mirrors, clocks, brackets, cabinets and lamps without danger of wall damage. You simply move the Stud Finder along the baseboard and the magnetic indicator will automatically point out where the nails are that join the baseboard to the stud. Accurately locates metal objects within ⅜" from indicator. Magnetic energy guaranteed for life. Full instructions included. **$1.00** *ppd.*

13-Pc. Chrome Vanadium Set

Made for Speed Drilling

Finest professional quality at less than you'd ordinarily pay for common twist drills! Unconditionally guaranteed to easily cut through the toughest steel. Specially hardened to give long and excellent service. Have full jobber-length shanks. Packed in handy, sturdy, plastic case with separate slot and markings for each drill. Complete set in 64ths, from 1/16" to ¾" **$1.79** *ppd.*

Adjustable HACK SAW

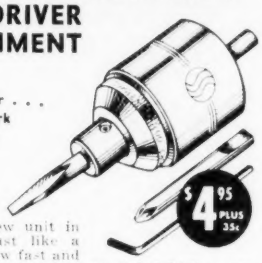
Reg. $3.98 *Our Price* **$1.95** *plus 20c*

Fits all standard blades, highly polished rust-proof plating, easy finger-tip tightening. Correctly balanced; tubular construction and advanced scientific design guarantee easier cutting.

Top Grade Hacksaw Blades—98c doz. ppd.

Supreme POWER DRILL SCREWDRIVER ATTACHMENT

Fits All Drills, ¼" and Larger . . . Takes the Work Out of Using Screws



Clamp this new unit in your drill—just like a bit, and see how fast and easy it runs every screw up tight! Light, compact, and fool-proof, this attachment is actually a screwdriver blade with a built-in clutch . . . the spinning drill chuck drives the screw only when you press with the drill. Release your pressure, and the friction clutch releases the screw end. Changeable blades included for either slotted head or Phillips screw, with Allen wrench and complete instructions. For screws up to 3/16" diameter . .

only **$4.95** *plus 35c handling and postage.*

Also Heavier Duty model for screws to ¼" diameter *only* **$6.95** *plus 35c*

6" ADJUSTABLE DADO SET

2 Blades and 5 Chippers

Get new pleasure and usefulness from your saw with this variable dado head. Cuts perfect grooves in wood, leaves no burrs or splinters or breaks. Width of cut adjustable ⅛" to ¾", with range of depths. Specify ½" or ⅝" bore. Includes two blades and five chippers.

Reg. $14.95 *Only* **$4.95** *Plus 50c handling and Postage*

ROTO HOLESAW

Fits into any electric drill—cuts circular holes of 1", 1½", 2" and 2½" diameter, and up to ¾" deep. Carbon steel saw rings interchangeable in aluminum saw head. Use on wood, plastics, soft metals.

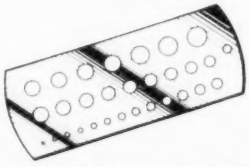
only **$4.95** *Plus 30c for handling-postage*

Don't Ruin Precious Materials

Check Drill Sizes with

JOBBERS DRILL GAGE

Reg. $1.49 NOW **69c** *ppd.*



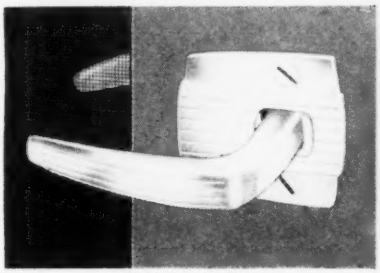
Heavy 8 oz. polished steel gage plate measures 29 different drill sizes from 1/16" to ½" and in numerals from .062 to .500. Precision machined measurements assure the right drill for the right job. Don't chance ruining your next wood or metal job by using the wrong size drill . . . PLAY SAFE . . . use the JOBBERS DRILL GAGE.

Minimum Order $1. Send check or money order. If C.O.D., fees extra. Money Back Guarantee.

SCOTT-MITCHELL HOUSE, INC., DEPT. MS-35, 611 BROADWAY, N. Y. 12, N.Y.

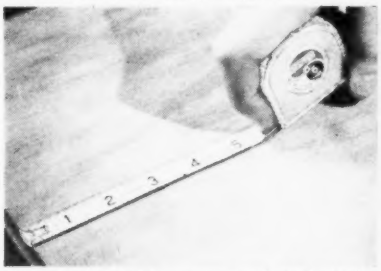
STANLEY and YOU work together

Hardware for decorative beauty and functional efficiency... tools for satisfying accomplishment. That's how you and Stanley work together to get good jobs well done.

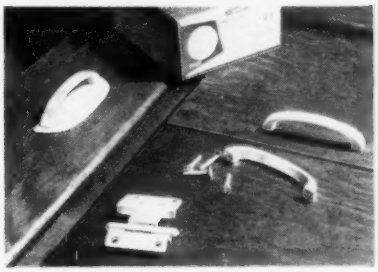


Putting a solid brass latch on your storm and screen door. Top quality, push-pull action, easy to install — just drill 1" hole. A *Hardware Week special at $2.69*, regular price $3.65.

In the groove with the router, rugged little work horse of the work shop. Versatile, light weight and high speed, motor powers other Stanley Electric Tools. *H15 Router — $39.95.*



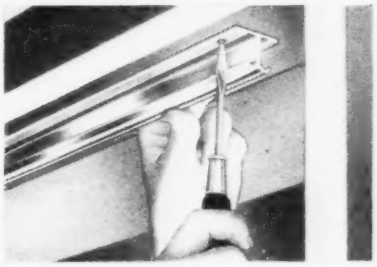
To get the right measure of work to be done. "Pull-Push" rule packs up to 12 ft. of accuracy in 2 inch case. Flexible, white face steel tape with easy to read numbers. *No. 1206W — 6 ft. 98c.* 8, 10, and 12 ft. rules also available.



In today's style, in today's metal... aluminum cabinet hardware, lustrous, warm and modern as this minute. Other metals, styles and finishes in complete Stanley line. Ask for Catalog F100. Use coupon.

Taking the ache out of trimming with Grasshear. New low price — same high power. Light weight aluminum handle and housing. No stoop, squat, creep or crawl. It's quick and easy with *H190 Grasshear — $39.95.*

Drive and draw screws automatically with one tool! This new, longer "Yankee-Handyman" No. 433H spiral ratchet screw driver saves time and effort. Complete with ¼" bit. *A Hardware Week Special at $3.69*, regular price $3.98.



Sliding door hardware. For that room you're going to finish yourself... for all the closets in that new home... smart, space saving, smooth sliding Stanley. See free descriptive folder for further details. Use coupon.

All these tools and hardware at your hardware store. Use coupon for information and helpful hints.

"How to Work with Tools and Wood" — Now available in new Pocketbook edition. More than 200 pages ... over 400 illustrations and diagrams. Only 25¢.

THE STANLEY WORKS, 443 Grove Hill, New Britain, Conn.

Gentlemen: Yes, I'd like the free items checked below:

- ☐ Cabinet Hardware Catalog F100
- ☐ Stanley Tool Catalog 54
- ☐ Door Latch Folder H36
- ☐ Stanley Electric Tool Catalog EH13
- ☐ Sliding Door Hardware Folder G45

and _____ (NUMBER) copies of "How To Work With Tools and Wood" at 25¢ each.

Name _____

Address _____

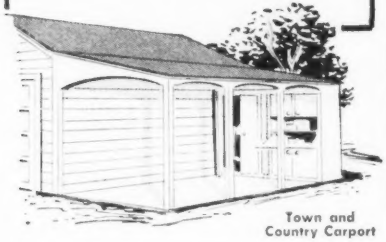
City _____ Zone _____ State _____

THE STANLEY WORKS, NEW BRITAIN, CONN. • HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL • STEEL STRAPPING

MAKE IT AT HOME WITH HOMASOTE PANELS

...make it easier

...make it for less!



Town and Country Carport

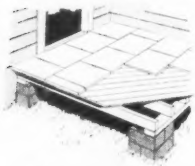
Want to build things that are *really* worth building—things that are different, interesting, practical—*and build them without blueprints?* Homasote has the answer—a group of indoor and outdoor *make-it-at-home* projects—to brighten your home and ease your storage and space problems.

Hutch Cabinet

Our Simplified Easi-Bild* Patterns and "Make-it-at-Home" folders make it easy for you to build a distinctive hutch cabinet ... a smart, handy storage chest ... a space-adding Town and Country carport ... or even a new bedroom for Junior in the attic, complete with sound-deadening floor for *your* convenience. These plans give you all the information you need—including a list of all the materials required.

Storage Chest

Your primary building material is Homasote Insulating-Building Board—time-tested, weather-and-climate tested ... proved by use in such difficult locations as Alaska, Tropical Africa and Little America (near the South Pole). Homasote *works easier* than wood ... costs less than wood ... can be wallpapered, painted or stained. Homasote is available, throughout the U.S. and Canada, in 7 thicknesses—and in a wide range of sizes up to 8'x14', each to do a specific job efficiently.



2' x 2' flooring

Whether you use it for one of the places we suggest ... for walls, roofs, ceilings, wall or roof sheathing, exterior finish, underlayment or finished flooring, or other applications—you'll do it *better* with Homasote! For patterns, folders, or general information—fill out and mail the coupon today.

18 new ideas

*T.M. Reg. Easi-Bild Pattern Co.

MAKE IT AT HOME—WITH HOMASOTE

HOMASOTE CO.
Department C-4, Trenton 3, N. J.

I enclose $ ..... for patterns or literature as checked:

- ☐ 3 Make-it-at-Home folders (10¢)
- ☐ Town & Country Carport #273 ($1.00)
- ☐ Hutch Cabinet #270 (75¢)
- ☐ Storage Chest #269 (50¢)
- ☐ Homasote Boards folder (10¢)

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

My lumber dealer is: .....

FIX IT YOURSELF

For... **FUN PROFIT ECONOMY**

By Percy S. Graffam

Associate editor

You are invited to send your inquiries on home repair problems—Interior and exterior, as well as on items used in the home. They may concern construction, heating, wiring, plumbing, painting etc., and may involve wood, metal, leather, plastic, glass or any other material. All inquiries will be answered as promptly as possible, either in this column or by personal letter. Be sure to enclose addressed stamped envelope when writing to Mr. Graffam.

ATTIC VENTILATION

Q *Is there any other way to ventilate an attic without cutting louvres in the ends of the house? Should there be cross ventilation?*

A Cross ventilation is desirable and can be accomplished by installing metal ventilators at each end of the roof. They are easy to install from the outside of the roof. Take off a few shingles and, with a keyhole saw, cut out a hole in the roof board; then slide the ventilator into place. Replace shingles around flange of ventilator. Most ventilators are provided with a wire screen so that bugs, flies, etc., cannot get into the attic space.

CHIMNEY

Q *In building a chimney, is a liner necessary; and how is it put in?*

A Chimnies can be built without a flue liner, but a liner is recommended because it presents a smooth surface and increases the efficiency of the chimney. It prevents soot and is not a fire hazard. Because smoke travels in a swirling motion, a round flue is more efficient than a square one. All joints of a chimney flue should be set in mortar and pointed smooth on the inside. As the brick work is built the flue is set ahead of the masonry and the brick work built around the flue. Leave no voids, keep filled with mortar.

ILLUMINATED PHOTOS

Q *Would you kindly give me information on how to make pictures with an electric fixture in the back?*

A To make an illuminated photo the print is made on a special paper such as Eastman's Translite paper. The print then is mounted on a piece of sandblasted glass and placed in a frame. A shallow box is built on the back and illuminated with two twenty-five watt tubular lamps or thin line fluorescent lamps. The frosted glass will diffuse the light so that the picture will stand out.

SCREEN PAINTING

Q *Aluminum frames get black, and fly-screen shows a powdery white oxide. Is there a varnish or other treatment to prevent this?*

A Aluminum frames and screens will oxide the first year or two and even may pit to some degree. This is a normal condition. Aluminum will not rust or fail by corrosion and in this sense need not be painted. However, as this oxide coating forms from exposure, it acts as a sponge and absorbs dust and sometimes becomes unsightly. A clear plastic spray will keep the frames looking better. It also can be used on screening wire. Be careful not to fill the pores of the screen when spraying. You can buy this plastic liquid in a spray can.

PLASTERING

Q *In plastering a room where there is an opening into another, how is the edge of the opening protected so that the plaster will form a straight, smooth edge?*

A After the plaster board has been installed, a metal bead edging is tacked to the corner. This edging protrudes the thickness of the plaster so that, when the room is completely plastered, the edge will show just a thin metal line at the corner. Window and door openings are finished off in the same manner where a wooden trim is not used. See photo.

PORCH CRACKS

Q *How can I deal with cracks in the porch steps? I am afraid they will lead to rot as rain collects in them.*

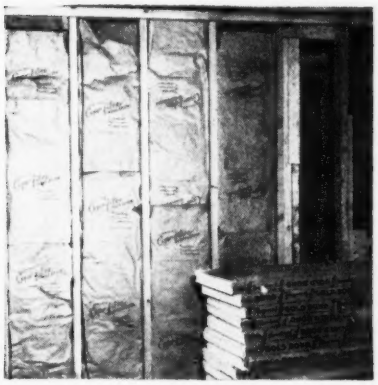
A Cut away any soft wood and fill cracks slightly overfull with Plastic Wood. If cracks are wide, build in from the sides with layers of Plastic Wood, allowing each layer to dry before applying the next one. After Plastic Wood has hardened, sand flush and smooth. Touch up with paint to match steps.

REFINISHING

Q *Will you please tell me how to refinish a writing desk or other piece of furniture that is veneered?*

A A veneered article can be refinished in the same way as solid wood, except that a stain on veneer finishes lighter than it does on solid wood. To prevent a water stain from darkening too much, moisten the veneer with water before the stain is applied. This will prevent the stain from penetrating too deeply.

INSULATION



Q *When adding insulation to walls, is a vapor barrier sufficient or should other insulation be used in addition to the vapor barrier? What is the best year 'round insulation to use?*

A The kind of insulation depends upon locality, climate and to some extent on what the house is built on, how well it is built, and what it is built of. The amount of insulation depends upon how well the house is sheltered from cold winds; for houses in the south, how much they are protected from the sun by shade, as insulation acts both ways—to keep the heat in, and also to keep the sun's rays out. As you did not state whether you planned on a wood frame house or one of brick construction I assume it is a frame house.

There are many kinds of insulators. Reflective insulation, which does not store up heat and reflects the sun's rays, is excellent in the south. Here insulation's chief purpose is to keep the sun's heat out of the house during the day and allow rapid cooling at night. This type of insulation comes in rolls and is tacked to the studding with the bright side not touching any other surface. If both sides are shiny, tack the foil in the center of the two by fours with an air space on both sides. Fasten it all around the openings, lap and seal the edges. To insulate the house for cold conditions, a batt or blanket type insulation is used because it is easy to install, requires only a staple gun. (See photo.) This type of insulation is made of loosely matted plant fibers, hair, mineral wool and usually is covered with a coarse Kraft paper to hold the material in position. It is available in 1", 2" or 3" thicknesses and in widths to fit

(*Continued on page* 202)

HOW TO SUCCEED WHILE YOU'RE STILL YOUNG

IT SURPRISES many people to learn that the average age of the men who respond to our advertisements is closer to forty than to twenty. But it's not hard to understand why this is true!

Most young men are *satisfied* with their progress in business. Their native ability and energy are enough to win them regular promotions and salary increases. They find success only a matter of time.

But the day comes, often with a shocking suddenness, when this easy and casual progress ends abruptly.

Many a man wakes up with a start in his thirties or forties to find that his income has leveled off, and that promotions have ceased.

"I'm not getting ahead as fast as I should," he says to himself. "Where am I going to be ten years from now?"

Why does this pathetic pattern appear in so many promising careers?

The answer is simple: Sheer ability and energy can carry a man to the mid-way point in business . . . *but only a thorough knowledge of business fundamentals can help him beyond that point.*

If you realize that fact while time is still on your side—and act on it—*you can succeed while you're still young.*

FREE . . . "FORGING AHEAD IN BUSINESS"

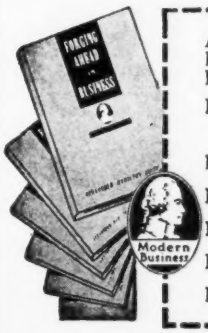
We do not claim that you must have the Alexander Hamilton Course in order to succeed in business. But we do say that *you cannot succeed without what is in the Course!*

All the Institute does is offer you a convenient and time-saving means of bringing this knowledge to you in your spare time; and in a form that has *proved* to be practical and effective for more than forty years.

So that you may judge for yourself whether or not you think the Institute can help you, we have published an informative 48-page book titled "Forging Ahead in Business."

We believe that this little book will help any man get down to bedrock in his thinking; however, there's no cost or obligation for it because—frankly—we've never been able to put a price on it that would reflect its true value. Some men have found a fortune in its pages.

If you would like a complimentary copy of "Forging Ahead in Business," simply sign and return the coupon below. It will be mailed to you promptly.



ALEXANDER HAMILTON INSTITUTE
Dept. 310, 71 W. 23rd Street, New York 10, N. Y.
In Canada: 57 Bloor St., W., Toronto, Ontario, Canada

Please Mail Me, Without Cost, a Copy of Your 48-Page Book—
"FORGING AHEAD IN BUSINESS"

Name.....
Firm Name.....
Business Address.....
Position.....
Home Address.....

Popular Mechanics *presents*

Jobs and Problems of Many Kinds Made Easier

Here are famous Popular Mechanics books that will help you—save time and money; make extra money; make many jobs easier; enjoy hobbies and pastimes; build, remodel or repair your own home; get the most out of your home workshop and keep up with the world. Students and teachers and farmers, too, will find among these books, many titles of helpful interest. All books are cloth bound and are illustrated with photos, drawings, plans and diagrams—the most completely illustrated books published today.

Complete Money Back Guarantee

Order for your personal needs and for gifts by number on the coupon below. Examine books for 5 days and return any that do not please you or meet your needs. Full purchase price will be refunded. Prompt shipment and delivery guaranteed.

Select from This List

Informative Gift Books

Picture History of American Transportation (1)
From the horse to the jet plane. The fascinating story of transportation. 320 pages and more than 1000 pictures. $5.00

Fifty Years of Popular Mechanics (2)
The awe-inspiring story of American progress drawn from a half century of the pages of Popular Mechanics, 1902 to 1952. 320 pages. 600 pictures. $5.00

Popular Mechanics Auto Album (3)
A fascinating and instructive book on the automobile and its development from the very start. Fully illustrated. $3.00

Popular Mechanics Album of Aviation (4)
The thrilling picture story of aviation from Leonardo daVinci to the F-86 Sabre Jet. 192 pages. $3.00

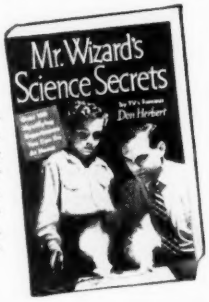
Popular Mechanics Railroad Album (5)
The story of the "iron horse" in America from 1830 to the streamlined trains of today. 160 pages. $3.00

Books for Boys and Girls

Boy Mechanic (6)
This is one book every boy shown own. Teaches youngsters to use their heads and hands and provides many hours of creative enjoyment. $2.95

Golf for Boys and Girls (7)
By Chick Evans, the world's greatest golf stylist. A basic book on golf that promises an "under 90" score in the first season. Illustrated. $3.50

Mr. Wizards Science Secrets (8)
By televisions' famous Don Herbert. A book of fascinating experiments for young people drawn from the author's famous television shows. $3.00



Home Building and Maintenance

Build It Yourself Ranch House Book (9)
Five rooms, bath and carport home for the amateur builder to build himself for $5000 to $7500. $3.50

Concrete Block House You Can Build (10)
Built in many locations by amateur builders, complete for less than $4500. Fully illustrated. Many plates in color. $2.00

Your Home and How to Build it Yourself (11)
The first of Popular Mechanics famous "Build It Yourself" homes. Beautiful 6-room house with full basement and breezway. Plastic Binding. $3.00

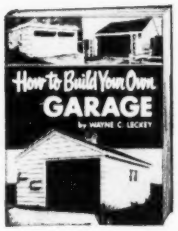
Precut House You Can Build for $1800 (12)
A brand new house to be built from a prepared kit of materials in three stages. First stage $1800. $3.00

How to Build and Enjoy Your Own Outdoor Kitchen (13)
How to build outdoor fireplaces plus all about outdoor kitchens and cooking and many recipes. $2.00

Roof Framing (14)
The Poulsen method. Roof layout in one-fifth of the usual required time. Diagrams and tables. $3.00

How to Paint With Brush and Spray (15)
Includes house painting—exterior, interior walls and woodwork, floors, furniture, etc. $2.50

How to Build Your Own Garage (16)
25 garages you can build yourself. Complete instructions, plans and pictures. Packed with usuable garage information. $3.50



Guide to Home Repairs (17)
Packed with money-saving, time-saving, do-it-yourself information for home maintenance. $2.50

How to Remodel Your Home (18)
A practical up-to-the-minute book for the home owner covering all phases of home modernization and remodeling. A real do-it-yourself book. $2.95

Home Plumbing Guide (19)
How to do your own plumbing. Covers both installation and repairs. Describes methods, materials and tools needed. $3.50

Lawns and Gardens (20)
How to grow the best lawn and garden in any neighborhood. A complete guide to gardening and landscaping. $2.50

Radio and Television, Electricity

All About Television (21)
A new and timely book for the set owner. Tells how to select a TV set, install set and antenna, test, replace parts and repair and get better reception. $3.00

Radio, TV and Electronics Handbook (22)
An ideal book for the student, beginner and experimenter. Tells how to build radios, amplifiers, transmitters. By Popular Mechanics radio editor. $2.50

Electric Fix-It Book (23)
Electric repairs made easy for the home owner. Tells how to do a complete house wiring job. $2.00

Automotive

Motorists Handbook (24)
585 practical articles of helpful information covering cars from 1940 to 1954. Helps save hundreds of dollars on car upkeep. $2.00

Motorists Fix-It Book (25)
Covers all the repairs, service and maintenance a car owner can do himself. Helps make cars run better, look better and last longer. $2.00

How to Restore Antique and Classic Cars (26)
Practical information on the complete restoration of antique and classic cars, with many examples of restoration and accounts of those prominent in this field. $2.95

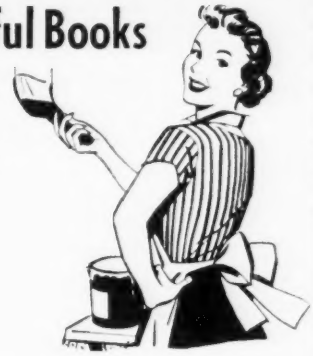
Popular Mechanics Car Owners Manuals
By C. E. Packer. The most authoritative books obtainable. Prepared with the help of the car manufacturers.

Manual for Chevrolet Owners (27) $3.50
Manual for Ford Owners (28) $3.50
Manual for Plymouth Owners (29) $3.50

Worlds' Most Popular How-To-Do-It Help and Other Practical Informative Books

Featuring Practical, Useful Books

for Home Owners • Home Shop Fans • Craft Workers • Hobbyists • Farmers • Students • Manual Arts Instructors and Many Others.



Furniture

All About Upholstering (30)

By John Bergen, famous furniture designer. A complete and practical book on how to do your own upholstering at home. New methods and new materials make upholstering easy. $3.50

100 Beautiful Pieces of Furniture You Can Make (31)

Real furniture projects for the craftsman with few tools. Step by step instruction. Many new professionally designed pieces included. $3.00

Home Workshop

100 Best Woodworking Projects (32)

100 cream of the crop projects selected for their popularity by Popular Mechanics Editors. $2.00

Planning Your Home Workshop (33)

Describes six basic power tools, gives floor plans, layouts, etc. 250 photos. 100 drawings. $2.50

Portable Electric Tools (34)

A guide to the selection and use of portable power tools with instructions for many projects on which the tools can be used. $2.00

60 Power Tools and How to Build Them (35)

Practical, usable, good quality tools that you can make from low cost and discarded materials and save hundreds of dollars while acquiring a fine power workshop. $2.50

Welding, Brazing, Soldering (36)

All of the tricks and know-how of good soldering, welding, etc. One section shows how to make welding equipment and use it. $1.75

What To Make

Toys You Can Make (37)

You can make some of the very finest toys for children of all ages, without special tools and using only very inexpensive materials. $2.00

You Can Make a Stradivarius Violin (38)

Book includes 8 actual size plans, how to make the tools you need and where to get the materials, besides complete instructions. $3.50

23 Boats You Can Build (39)

Build a boat for pleasure or profit. Complete guide for building 23 different kinds—row boat, sail boat or power craft. $2.00

200 One Evening Projects (40)

Selected by the editors of Popular Mechanics. All are attractive and useful things, requiring only hand tools. $2.00

What to Make

Popular Mechanics famous workshop and hobby guide for homecraftsmen.

Single volumes Nos. 1 to 12 (41) each	$1.75
12 Volume set (42)	$18.00
1952 Volume (43)	$2.00
1955 Volume (44)	$2.00

What to Make for Children (45)

175 projects—things to make from discarded and inexpensive materials. Something for all ages and the whole family can join in. $2.00

What to Make With Concrete (46)

Shows how to make bird baths, garden pottery, walks, driveways, etc. A complete guide for home and farm. $2.00

Sports and Games

Family Book of Games & Sports (47)

Games for every occasion for children and adults. Over 500 different games collected into one big handy easy to use volume. $2.95

Guide to Good Hunting and Trapping (48)

By Joe Godfrey, Jr. An all-around book for the hunter and outdoors man. The author has spent a lifetime doing just what he writes about. Sections on game birds, guns and ammunition. $3.00

Outdoor Sports Manual (49)

200 helpful articles for hunters, fishermen, campers, trappers and boatmen. $2.00

Farm

Farm Manual (50)

A book every farm home should have. Filled with short-cuts, labor-saving ideas and ingenious apparatus you can make. Something in it for every member of the farm family. $3.00

Hog Profits for Farmers (51)

Bigger profits from practical advice and information contributed by many noted experts and authorities. 15 minutes with this book will prove its value. $3.00

Artificial Breeding and Livestock Improvement (52)

Written in non-technical language, this book covers the entire subject of this new breeding method plus information on livestock improvement. $3.50

Veterinary Guide for Farmers (53)

Hundreds of thousands of farmers use this book daily to diagnose and treat livestock ailments. It will make and save money for every farm every year. $3.95

Miscellaneous

Christmas Handbook (54)

A collection of ideas, gifts, decorations, toys, etc. to make at home. This is a book for every member of the family. $2.00

Gadgets Galore (55)

A book by Dorsey Connors of Television fame giving hundreds of household hints and other information for homemakers. $2.95

Producing Food for Home Use (56)

How to produce and conserve food from farms and home gardens. Tells how to grow, preserve, store and freeze foods. $3.00

How to Take Better Photographs (57)

A helpful and fascinating book for all photographers—amateur and professional. More than 200 reproductions of prize-winning photographs. $2.50

Use This Coupon for Quick Book Service

ORDER BY NUMBER

1A	2A	3A	4A	5A	6A	7A
8A	9A	10A	11A	12A	13A	14A
15A	16A	17A	18A	19A	20A	21A
22A	23A	24A	25A	26A	27A	28A
29A	30A	31A	32A	33A	34A	35A
36A	37A	38A	39A	40A	41A	42A
43A	44A	45A	46A	47A	48A	49A
50A	51A	52A	53A	54A	55A	56A
57A						

HOBBY BOOKS
154 East Erie St., Chicago 11, Ill.

Send at once, Popular Mechanics books as indicated by circled number to left.

( ) Remittance for $ _____ enclosed. Send postpaid.

( ) Send COD. I will pay postman plus charges.

I understand I may return any book within 10 days and you will refund the full purchase price.

Name _____

Address _____

City _____ State _____

News About Glues

FOR "DO-IT-YOURSELFERS"

FROM UNITED STATES PLYWOOD CORPORATION

World's Largest Plywood Organization

NOW THERE'S A WIZARD WITH WOOD FOR EVERY GLUING JOB

New! Amazing Cement Glues Without Clamps.

LOOK FOR THE WELDWOOD NAME ON THE YELLOW AND BLACK LABEL!

Weldwood® CONTACT CEMENT

A revolutionary new concept in gluing. *First* it dries, *then* you make the bond. And the bond is made instantly, permanently, on contact. No clamps, no presses, no nails. It's a wonderful new tool for do-it-yourselfers. 25¢, 35¢, 60¢ and larger sizes.

3 BIG USES

1. For applying plastic laminates like Micarta or Formica to counters, tables, etc.

2. For applying plywood wall panels without nails (no unsightly nail holes — no puttying).

3. For making or mending things made of wood, metal (including aluminum), cloth, felt, paper — 1001 uses around home, shop, garage.

America's fastest selling wood glue

Weldwood *Plastic Resin* GLUE

Makes joints actually stronger than the wood itself. Highly water-resistant, stain-free, rot-proof. First choice of amateur and professional restorers, cabinet makers, wood workers. For making or mending things, it's deservedly America's most popular wood glue.

Another new WIZARD with WOOD

Weldwood PRESTO-SET* GLUE

Ready to use! Sets fast! Bonds like magic! It's the perfected white glue, worthy of the Weldwood name. Especially developed for do-it-yourselfers. Doesn't spoil or stain. Works like a wizard on just about everything made of wood, cloth, leather, fibre, paper, etc.

And for a perfect finish, use *these* WIZARDS with WOOD

FIRZITE® Use WHITE FIRZITE on any wood to get those rich "woodsy" blond or pickled effects. (For pastel tones, tint with colors-in-oil.) A "must" undercoater on fir plywood. Use CLEAR FIRZITE to tame that wild grain on fir plywood.

SATINLAC® For that costly hand rubbed look when you want a natural finish on wood. Heightens and preserves the full beauty of any wood; doesn't "yellow" or darken with age.

At all hardware, paint and lumber dealers.

FREE! HELPFUL LEAFLETS—MAIL COUPON NOW

UNITED STATES PLYWOOD CORP., Dept. 293, 55 W. 44th St., New York 36, N.Y.

Send me leaflets on:

☐ Weldwood Contact Cement ☐ Weldwood Plastic Resin Glue

☐ Weldwood Presto-Set Glue ☐ Firzite ☐ Satinlac

NAME_____

ADDRESS_____

CITY_____ STATE_____

*TRADEMARK

wall studs. It also is available with an aluminum foil backing.

While this type of insulation will keep the house warm and save heat, you need the vapor barrier to protect the insulation from dampness. The kitchen, bathroom and laundry, all carry more moisture than the air outside. While dew will not form on the walls or ceiling of a well insulated house often it will condense in the insulation inside the walls and, in time, cause the wood to rot and the paint to peel. Insulation is not complete without ventilation, especially if your house is weather-proofed. Plan some form of controlled ventilation such as the use of fans to bring in fresh air and carry off the kitchen odors, stale air and excess moisture. Arrange your windows so you can get cross ventilation. Install attic vents to help cool the house in summer.

INSULATION

Q *I have a new house only a couple of years old, and I find that moisture collects on the walls. The house is insulated, it has no basement. What can I do to remedy this condition?*

A The moisture condition you describe is quite common in newly built one-level homes. It is caused by an overabundance of water vapor in the air; this condenses and forms water droplets. Following are a few things you can do to reduce the amount of this water vapor in the air. Provide adequate ventilation, install attic and kitchen fans to carry off excessive humidity from the bath, laundry and kitchen. Leave windows open in laundry while washing and drying clothes. Open bathroom window after bathing. Install attic louvres which will help circulate the air, thus reducing water vapors. Ventilate water and space heaters, ranges, refrigerators and clothes driers. Install storm windows. Provide proper drainage around building to keep moisture vapor from rising in the house. The use of an electric dehumidifier also will reduce water vapor. Be sure the inside windows are tight and weather-stripped.

REFINISHING

Q *I bleached a mahogany veneered table and finished it with a lacquered, sprayed finish. Bubbles formed and, after a short time, hairline cracks appeared in the finish. Can you tell me what I did wrong?*

A If too much bleach is used on veneer it may go through it and attack the glue, thus forming gas bubbles. I would suggest a two-solution bleach, diluted with one part distilled water to two parts bleach, for mahogany veneer. The grain raised by the bleach should be sanded and the wood allowed to dry thoroughly, then given a spray coat of bleaching lacquer. The finish coats should be specially-made water white lacquer and, since only a small amount of body is in the lacquer in order to keep them light, two or three coats are necessary for a full bodied finish. Bubbling also happens in lacquer when the top film sets

before the solvents have had time to escape, or if the lacquer is not sprayed at the right pressure or the proper distance.

If using a bleach, I would recommend one of the two-solution kind. If using a bleach, I would recommend one of the two-solution kind. If you wish to repair a loose piece of veneer, lift up a larger section with a sharp chisel and glue firmly, fastening with a clamp or some other device until it is thoroughly dry. If the piece of veneer is completely off it is a job for the cabinetmaker, as it takes special tools and experience to repair.

INSULATION

Q *I have built a room on the back of my house with no cellar, but with a crawl space of 2½'. There is no insulation in the walls, ceiling or floor. The floor is cold. Can you tell me how to make this floor warmer and what can be done about insulation?*

A Inasmuch as you have a crawl space of 2½' it might be possible to work under the floor long enough to install a batt or blanket type of Rock Wool insulation. These blankets come fully enclosed in kraft paper wrapping and can be put in place easily and fastened with a staple gun.

In addition, I would lay an inexpensive asphalt roofing paper on the ground to keep moisture away from the floor. To insulate your walls is no problem. Small holes are made in the top of the outside walls, one for each cavity, and loose Rock Wool is blown in at a low pressure of two pounds per square inch. The pressure will give a firm, even pack and will assure maximum insulation. The holes are then covered with material matching the original. Use the same method for the roof, probably from the outside.

Photo Courtesy of Johns-Manville

CONSTRUCTION—INSULATION

Q *Problem No. 1: The kitchen floor is sagging toward the center, which I believe is due to the fact that the rafters have quite a few knots in them. In order to overcome this is it advisable after leveling off the floor to bolt more rafters to the original ones? If so, would it be*

(*Continued on page* 207)

With a Foley Saw Filer you can file all hand saws, also band and cross-cut circular saws. It is easy to operate—simple adjustments — no eye-strain. Patented jointing principle evens up all irregular teeth and makes an old saw cut just like new.

OWN YOUR BUSINESS

Start in Spare Time with a

FOLEY SAW FILER

Here is a steady repeat CASH business you can start at home in your basement or garage, while you are working at your regular job. No experience is necessary to turn out perfect cutting saws—"the first saw I sharpened came out 100%. I think the Foley Saw Filer is a marvel of perfection," writes Clarence E. Parsons. Every saw you sharpen will bring you new customers. You will find you can make up to $3 or $5 an hour—$20 to $30 a week in your spare time as a starter. "I have done 4 to 5 thousand saws in my spare time in the 4½ years since I got the outfit, and they are all coming back with repeat orders."—Len Crego.

This Free Book Shows How To Start

"MONEY MAKING FACTS" shows you how to get plenty of saws to file without canvassing, and how you can develop into a general repair shop with a modest investment, no overhead and no stock of goods to carry. This cash business will help pay the rent, buy groceries, or a new car. This is a helpful, practical book that tells just what to do — send for your free copy today. No salesman will call.

FOLEY MFG. CO., 320-5 Foley Bldg. Minneapolis 18, Minn.

Send me free book "MONEY MAKING FACTS"

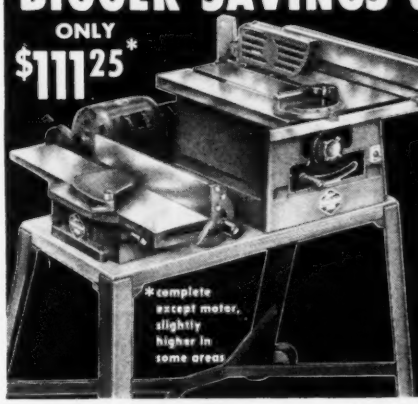
Name .....

Address .....

City ..... State .....

BIGGER SAVINGS and BETTER WORK with this NEW *Atlas* COMBINATION TOOL

ONLY $111.25*



*complete except motor, slightly higher in some areas

Rips, crosscuts, shapes, dadoes, joints, planes, miters, moulds. Handles 95 per cent of all operations required in furniture building, household construction, remodeling. A compact, *portable* unit . . . . the most practical and efficient of all combination tools. No complicated or time-consuming setups. America's greatest power tool value.

WRITE FOR NEW FREE CATALOG

NEW MODERN FURNITURE PLAN BOOK

JUST ISSUED . . . 16 complete plans . . . only 50c. USE COUPON.

ATLAS PRESS COMPANY
323 N. Pitcher St., Kalamazoo, Mich.

☐ Please send me FREE illustrated literature on the new ATLAS Saw-Jointer Combination, and the name of my nearest dealer.

☐ Am enclosing 50c (65c outside U.S.A.) . . . send MODERN FURNITURE PLAN BOOK.

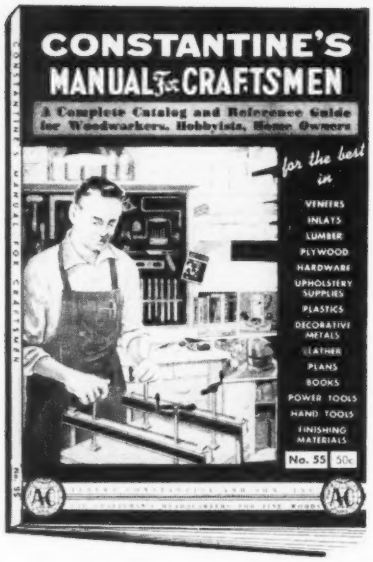
NAME _____

ADDRESS _____

CITY _____ STATE _____

WOODS

Special Offers by



WORLD'S LARGEST SELECTION OF RARE WOODS—OVER 100 KINDS

In Veneer, Inlays, Lumber Plywood, All illustrated in natural color. Professional instructions on wood finishing, veneering, joints, making inlaid pictures.

PLUS THE GREATEST SELECTION OF

"HARD-TO-GET" ITEMS

A few of the items we sell: Inlays, fancy cabinet wood, lumber, Ebony, Holly, Dimension cut lumber, lignum Vitae, Carving Blocks, Turning Squares, 120 kinds of veneers, Abrasive papers, archery woods, ball-board clamps, basswhics, bed fasteners, blueprints, Chair braces, brass chain, brass fencing, Craftsmen books, candlestick holders, candlestick sockets, card table hardware, casters, Chair cane, ceramic tiles, clamp nails, crib hardware, Dowels and dowel pins, dowel centers, drawer rollers, felt, Fick finishes, foam rubber, furniture clamps, complete professional finishing materials, Folding tabletops, hand tools, furniture pulls, modern and period, chest and ornamental hardware, all types of hinges and locks, small box hardware, Inlaid picture kits, inlaid card table tops, leather working tools, Micarta, revolving Lazy Susans, musical movements, moulded wood carvings, Metalcraft material, Moto Sander, nut bowl hardware, Picture frame moldings, Pre-Cut Wood Fits, perforated steel panels, plaster standards, plastics and plexiglass, internal carving bits, plastic polishing compounds, Electric routers, sanders, tool rheostats, hand drills, sprayers, revolving fixtures for television tables, chairs, etc. Fibre rush, screw hole buttons, spiral saw blades, sliding door track, sharpening stones, home owners specialties, 109 woods, ski woods, platform rocker springs, Table leaf supports, tack rags, thermometer cards, turned furniture legs, typewriter fixtures, Complete upholstery supplies, Veneer presses, wood burning pens, wood working instructions, black and copper wrought iron hardware, zigger wire. Send fifty cents today (refunded on 1st order) for your copy of the Country's leading Catalog, "Constantine Manual for Craftsmen."

FOR YOUR CATALOG RUSH THIS COUPON TODAY!

Yes, send me my copy of the Big Catalog "Constantines Manual for Craftsmen"

ALBERT CONSTANTINE AND SON, INC.
799 NH 135th STREET, NEW YORK 54, N. Y.

☐ Enclosed please find 50¢ (refunded on your first order).

Name .....

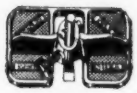
Street .....

City .....State.....

YOU'VE NEVER SEEN VENEER OFFERS LIKE THESE!

Here are ten exceptional veneer offers. An opportunity for you to stock up at bargain prices for immediate or future needs. Veneers are 1/28" thick and mostly 36" long in random widths up to 10" and 12". Burls and swirls, of course, are irregular sizes. Many veneers are priced less than actual market cost due to a fortunate purchase. Only two of each kind to a customer.

Offer No.	Veneer	No. Sq. Ft.	Delivered Cat. Price	Delivered Sale Price
J100	Avodire	10	$2.60	$1.65
J101	White Oak, U.S.A.	10	2.10	1.65
J102	Myrtle Swirls	10	3.30	1.65
J103	Mahogany, striped	15	2.35	1.65
J104	Mahogany, crotch, Af.	10	4.20	1.65
J105	Rosewood, Brazil	10	2.20	1.65
J106	Oriental wood	10	1.90	1.65
J107	Prima Vera	10	2.20	1.65
J108	Redwood Burl	10	3.50	1.65
	Total		$24.15	$14.85
J109	All above nine offers			$13.50
J110	Sat. , west of the Mississippi			$16.00

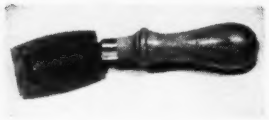


J111, Small Router: An invaluable tool for grooving, cutting dadoes for shelves, recessing hardware, inlaying, etc. A Stanley tool $1.75

LAZY SUSAN BEARING

J114. We can now supply our best-selling Lazy Susan Bearing in a 3" size for table centers and all small work $1.20

J115, the regular 6" size. High-grade, smooth turning . . . the best we have seen. Has 70 ball bearings. For tables, TV cabinets, chairs, etc. Only 5/16" thick.....$1.85



FINEST VENEER SAW MADE

To cut veneer like an expert, you need one of our thin, sharp, double-edge veneer-cutting saws. At a special bargain price if you order on coupon below. No. J112....$1.85

ROUND HANDLED NEEDLE FILES

5½" length. A set every craftsman should have. 12 different shaped Swiss Needle Files, planned and shaped to take care of almost every kind of fine filing need. Assorted set comes in attractive, plastic-covered case suitable for storage.
No. J113 .....$3.75

WE HAVE a large selection of **Wood-Pix Masterpiece Kits** with the veneers in uncut form so that a craftsman who likes jigsawing can have the pleasure of sawing the pieces to shape himself. Each set contains all necessary veneers, master drawings, border inlays, etc., and an illustrated instruction booklet. Do not confuse these with the Pre-Cut Kits, although some are the same subjects in larger size. These are our regular, standard kits, of which 50 are listed in the MANUAL FOR CRAFTSMEN. Each in a 15" x 24" box shown at right.

FOUR KITS RECOMMENDED FOR BEGINNERS

No. J116, Mountain Stream, 11" x 9½" $3.90
No. J117, In the Country, 9¼" x 14" 3.72
No. J118, Spanish Galleon, 8½" x 13¼" 4.28
No. J119, The Homestead, 11½" x 13¾" 4.62

FOUR OF OUR MOST POPULAR KITS

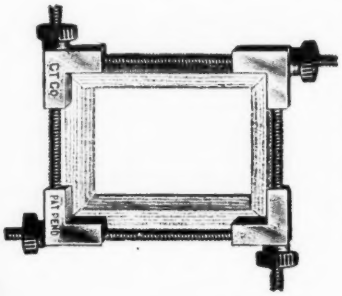
No. J120, Fishing Scene, 13" x 16"...$6.17
No. J121, Old Saw Mill, 13" x 16"... 5.21
No. J122, The Birches, 13" x 16"... 5.95
No. J123, Summer in Mountains, 12" x 24" 5.14

No. J124 Roll-eez Bearings. For wooden drawers. These excellent rollers make heavy drawers work like magic. For kitchen cabinets, chests, etc. Plastic rollers on steel frames. A set for one drawer consists of three rollers as illustrated and another unit of three rollers for use with a center guide if any. Complete set with nails and instructions .....$ .55

GREEN FELT

For tray bottoms, bases of standards, book ends, etc. Width 36".
No. J125 per Sq. Ft $ .30
No. J126 per Sq. Yd. 1.20

A FOUR CORNER CLAMP



A clamp that clamps all four corners at one time and does not mar the work. Absolutely accurate and holds firmly without slipping, until released. Corner blocks are aluminum alloy, screws of a good grade of ¼" steel, adjusting nuts are steel, quickly adjustable. Will fit any rectangular or square from 2" x 2" to 24" x 24"
Offer No. J128.....$7.30

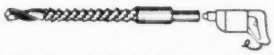
"TUTCH LATCH"

For cabinet doors. Opens automatically at a touch. Holds whether door is closed gently or slammed. Our most popular catch for wooden kitchen cabinet doors.
No. J129, Price.....$ .98

50 LARGE SAMPLES

Here's your chance to get a collection of 50 fine woods from all corners of the world, no two alike. Each sample is 1/28" x 4" x 9". The set is neatly boxed. The woods range all the way from aspen to zebra.
No. J127, Wood Samples.....
$4.75

THE STICKLEBACK DRILL ROUTER



Here is one of the most amazing new items that you have seen demonstrated in the various home and Do-It-Yourself shows throughout the country. Will fit in drill press or conventional ¼" electric drill. Works best with a preferred speed of 1200 to 2500 R.P.M. It drills, saws and routs lumber, plywood, pisboard, plastics, leather, plaster and cold rubber. It will not work on metal or masonry. Bits can be frequently sharpened. Comes in two lengths.

Offer No. J130 ¼" 2¼" length Price.....$1.25
No. J131 ¼" 3½" length Price.....$1.40

CONSTANTINE

...World's Foremost Craftwork Supply House

PRE-CUT INLAID PICTURES

SIX BEAUTIFUL SUBJECTS

ONLY $4.95 EACH

Finished size, approximately 8" x 10½"

No. J132, Mountain Stream
No. J133, Golgotha
No. J134, The Homestead
No. J135, Yachting Scene
No. J136, Flying Ducks
No. J137, Old Mill

NO TOOLS OR EXPERIENCE NEEDED

YOU can make valuable inlaid pictures of exquisite beauty the first time you try with our new, unique **Pre-Cut Wood-Pix Masterpiece** construction kits. They come complete and ready to assemble. No lessons are needed, and no experience or tools. Just follow instructions.

Each kit contains all pieces forming the picture sawed to exact shape by an expert. Also the walnut frieze, mahogany backing veneer, special polyvinyl resin adhesive, professional inlayers' crack filler and spreader, bangers, penetrating finish, cabinet finishing paper, two outline drawings, complete instructions, all beautifully boxed.

The whole family, from high-school age up, will enjoy making these fine-looking plaques.

ADJUSTABLE FILE AND TOOL HANDLE

Every shop can use several of these handles. They will hold hack-saw blades, files, knife blades, as well as many other tools in a vise-like grip. These handles have the exclusive self-equalizing jaws that hold along the entire length, rather than just at the front end. Jaws are made of hardened steel. All parts are of steel, except the hardwood handle. Quick adjustor Knurled knob assures easy and positive locking. **Offer No. J138...$1.25**

CLAMP FOR CORNER JOINTS

Making window screens, picture frames or frames of any kind is greatly simplified if you have one or more Bebus Corner-Clamps. For butt joints, mitered joints or mortise-and-tenon joints. Made of welded .062" gauge steel, size 7" x 7" on the corner, and takes stock up to 2½" wide. **No. J139** price each.....$2.25

IMPROVED SPRING CLAMPS

Few handier tools than this! For use whenever small parts have to be glued. 6" long; open to 2". **No. J142**.....$ .65

HIGH-GRADE LUMBER "CUT-OFFS"

Don't be content to use common lumber for your craftwork when you can get the same quality as listed in our catalog, but shorter or narrower "cut-offs" as we call them at a very special low price. Not selected, but each bag a real value. Thickness, ¼" to 2". Wood less than 1" thick is planed smooth on two sides; thicker than 1", generally rough. Length 4" to 12", sometimes longer. Widths 3" and more. Mahogany, walnut, cherry, oak, maple and various fine foreign fancy woods. Supply limited, so order at once.

No. J147, Bag weighing 20 lb. $4.95
No. J148, same west of Mississippi River $6.95

PLATFORM ROCKER SPRINGS

A truly hard-to-get and unusual item. For the ever-popular platform type rocker. In two sizes—the heavy duty spring unit for large rockers, base size 5½ x 4".

No. J149 Per pr. $1.95

The medium sized spring unit, base size 4¾" x 3½".

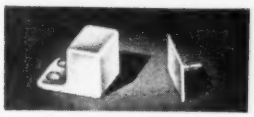
No. J150 Per pr. $1.40

FIBER SEATING RUSH

Fiber rush, a tough long-lasting material, is now used extensively in place of old fashioned rush. It looks well and wears like genuine rush. As it comes in continuous lengths, you can weave beautiful rush-bottom seats without difficulty. The fiber comes in five-pound coils sufficient for weaving one normal size seat.

No. J151, 5 lb. coil of fiber rush price $2.95

LOW COST MAGNETIC LATCH



The New Leco latch is simplicity in itself. The complete unit consists of a powerful, compact, permanent magnet, contact plate and mounting screws, polished plate, metal finish for beauty and corrosion resistance. Holds doors in proper position firmly yet gently. Doors open easily and smoothly without snap, noise or jerk. Will serve you the rest of your life.

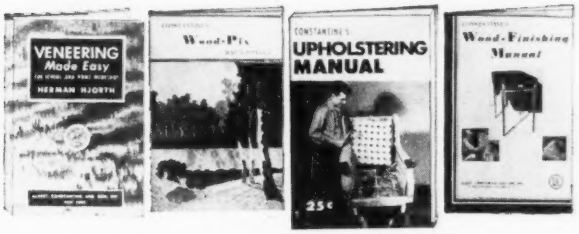
No. J140.....Price..49¢ **No. J141**.....Per doz..$5.25

BABY CRIB HARDWARE

All visible parts are nickel plated, others plain steel. Gate trips by pressure of knee. Trip rods are long enough to make 54" length inside. They are easily cut shorter if desired. Complete with screws, price per set, No. J152.....$2.55

SATISFACTION OR YOUR MONEY BACK

CONSTANTINE PUBLICATIONS



Veneering Made Easy, by Herman Njorth, published by Albert Constantine and Son. Answers every question about veneering. Over 100 pages, 80 illustrations. Bound in cloth and leatherette. Thoroughly indexed. Ideal for craftsmen who want to add professional character to their workshop projects. Excellent text for schools.

Offer No. J143.....**Postpaid price $1.95**

UPHOLSTERING MANUAL. Brand new—nothing like it before! Prepared by George Werner, instructor in upholstering in the Constantine School of Craftsmen, assures success in your first attempt at upholstering.

Pages packed full of information. Over 50 illustrations. Easy to follow.

Offer No. J144.....**Postpaid price 25¢**

Complete Wood-Finishing Manual
Contains all information you need to finish and refinish furniture and other woodwork with professional skill. Not a word wasted. Covers finishing materials, freshening up furniture, preparation of surfaces, stains and staining, sealers and sealing, filling the grain, high-lighting and glazing, penetrating wood-finish. Also wax, shellac, varnish and lacquer finishes; blond finishes; finishing fir plywood, etc. **FREE** with any order of $3.00 or more; otherwise, **Offer J145** .....$ .25

Secrets of Making INLAID PICTURES
Full instructions for both the professional and amateur methods . . . how to cut veneer . . . assembling picture . . . applying borders. **FREE** with any order of $3.00 or more; otherwise, **Offer J146** .....$ .25

ALBERT CONSTANTINE AND SON, INC.

799 HH EAST 135th STREET, NEW YORK 54, N. Y.

USE THIS COUPON — WE PAY ALL SHIPPING COSTS

CHECK the items you wish to order. **Minimum order, $3.00.** For C.O.D. service, attach $1.00 to coupon and we will ship C.O.D. for balance. Mail to **Albert Constantine and Son, 799-HH East 135th St., New York 54, N. Y.**

Offer No.	Price	Offer No.	Price	Offer No.	Price
☐ J100	$1.65	☐ J118	4.28	J136	4.95
☐ J101	1.65	J119	4.62	J137	4.95
☐ J102	1.65	J120	6.17	J138	1.25
☐ J103	1.65	J121	5.21	J139	2.25
☐ J104	1.65	J122	5.95	J140	.49
☐ J105	1.65	J123	5.14	J141	5.25
☐ J106	1.65	J124	.55	J142	.65
☐ J107	1.65	J125	.30	J143	1.95
☐ J108	1.65	J126	1.20	J144	.25
☐ J109	13.50	J127	4.75	J145	.25
☐ J110	16.00	J128	7.30	J146	.25
☐ J111	1.90	J129	.98	J147	4.95
☐ J112	1.85	J130	1.25	J148	6.95
☐ J113	3.75	J131	1.40	J149	1.95
☐ J114	1.20	J132	4.95	J150	1.40
☐ J115	1.85	J133	4.95	☐ J151	2.95
☐ J116	3.90	J134	4.95	J152	2.55
☐ J117	3.72	J135	4.95		

☐ Catalog $.50 (free with $1.00 order if requested)
☐ Wood-Finishing Manual $.25 (free with $3.00 order if requested)
☐ Secrets of Inlaid Pictures $.25 (free with $3.00 order if requested)
☐ All three free with order of $5.00 or more if requested

☐ I enclose $.....payment in full ☐ I enclose $.....balance COD

Name (please print).....

Street address..... City..... State.....

Announcing . . . for all HOMECRAFT & THE HOME OWNER readers

HOMECRAFT & THE HOME OWNER WILL PAY THE FULL PREMIUM FOR YOU ON A VALUABLE

$500.00

(with yearly increases to $1000.00)

Automobile Accident Insurance Policy

THIS POLICY IS YOURS AT NO ADDITIONAL COST TO YOU WHATSOEVER

Total cost of only $2.00 insures you FOR ONE FULL YEAR and *includes* FULL ONE YEAR SUBSCRIPTION—or extension of your present subscription—to HOMECRAFT & THE HOME OWNER

HOMECRAFT & The Home Owner is proud of the type of service it can now offer its readers. This automobile accident insurance policy is simple and clear cut. It pays $500.00 (more each year as you renew your subscription and policy) upon proof of fatality of the insured due to the damaging of a pleasure type automobile while he or she is riding therein, subject to the simple terms of the policy. Few of us carry all the insurance we would like. You now have a wonderful opportunity to increase your insurance coverage at *no cost to you.* We pay your insurance premium in full! And the low subscription price has not been increased one penny.

This policy is issued expressly for HOMECRAFT & THE HOME OWNER by the Commercial Life Insurance Company of Missouri. Only by arranging for thousands of policies could we bring you this opportunity. Don't hesitate one minute. Remember, the longer you keep this $500.00 policy, by renewing your subscription yearly, the more it is worth . . . up to $1,000.00 in ten years. And you'll have every issue of Homecraft & The Home Owner delivered to you regularly. All of this comes to you for the low price of the subscription alone . . . only $2.00.

If you are already a subscriber we will issue a policy to you upon receipt of payment, and your subscription will be extended an additional year. No policies can be issued without payment of $2.00, even if you recently entered or renewed your subscription.

ORDER CERTIFICATE

Homecraft & The Home Owner Magazine, Circulation Department, 63 E. Adams St., Chicago 3, Ill.

Yes . . . Please issue my $500.00 Automobile Accident Insurance Policy, and mail it to me promptly. Also enter my subscription to Homecraft and The Home Owner for a one year period. I enclose $2.00, payment in full for both the insurance policy and the one-year subscription.

NAME .....

ADDRESS .....

CITY AND STATE .....

Your signature .....

Please check one:

☐ I am now a subscriber

☐ This is a new subscription

Note: This policy is payable to the estate. It is not necessary to name a Beneficiary.

Fill in at right *only* if person to be insured is different from name above.

NAME .....

ADDRESS .....

CITY AND STATE .....

(Continued from page 203)

better to extend the rafters from the steel beam to the wall or just have little pieces supporting the rafters in sections? Problem No. 2: I have a Georgian type house with a vestibule which measures 4' x 8'. In this area there is a closet space. In the winter months the cold walls have a tendency to condensate. These walls are not insulated. I have applied two air vents on the roof but this has not helped to combat the problem. I have installed an exhaust fan and this has helped the vestibule space but it has not helped the closet space. I have been thinking of paneling the closet walls with cedar wood and would like to know how to go about doing this.

A Place new beams adjacent to your present beams from the steel beams to the wall. Place another beam crossways to these and with an adjustable jack post raise the floor to a level position. Now lag screw the old beams to the new. If your span is too great it might be well to leave a post in this position. In this case, dig a hole in the cement so you can install a footing for the post 24" x 24" x 12". Use a 1 (cement), 2 (sand), 4 (pebbles), mix. After this has set, the post can be installed in its permanent position.

To eliminate the condensation in the closet you must find some way to ventilate it, otherwise anything you may do will be of little benefit. Try cutting a vent through the roof into the attic space. Installing a vapor barrier on the walls should help. Place 1 x 2 strips on 16" centers vertically around the walls of the closet. Tack aluminum foil on these strips, bowing-in the foil so as to create an air space. Lap all joints 2". The closet can be finished off with real cedar siding (this comes in $^3/_8$" thickness) or with cedar plywood panels. Aluminum reflective insulation is available in 36" wide rolls at most building supply houses.

ODDS AND ENDS

A solution of 1 quart of hot water, 1 tablespoon of turpentine, and three tablespoons of boiled linseed oil kept hot in a double boiler will clean and polish a varnish finish. After carefully washing and drying the furniture you can buff the surface to a gleaming polish.

Want that mellow satiny finish instead of a glossy new look? Three methods may be used to give you those results!

(1) 3/0 or 2/0 steel wool used with care will do the job—rub with the grain only and work carefully. Watch corners and edges, for the finish must not be worn away—just mellowed.

(2) Sandpaper will mellow shellac, varnish or lacquer. 5/0 paper with oil or water does a nice job. Do not use water with shellac, however; the water will turn the shellac white.

(3) Rubbing compound applied with a felt rubbing pad will produce a beautiful lustre and reduce the gloss on lacquer or other similar finishes. Pumice with oil or water will do the same job.

Thrill your child with this drop-leaf desk and bookcase!

get complete detail drawings, photograph and directions in

FREE PATTERN KIT 305

—along with the picture-packed booklet, "Friendly Home Ideas in Western Pine." Write for it to Western Pine Association, Dept. 305-0, Yeon Bldg., Portland 4, Oregon.

This desk—scaled to a child's proportions—is just like a grown-up's with pigeonholes, pencil racks, drawer, shelves and cabinet. And the mellow woods of the Western Pines* lend their own special charm to the simple New England design.

It costs so little to build this desk with the woods of the Western Pines. You'll find that they cut clean and accurately with hand or machine tools and take all finishes well.

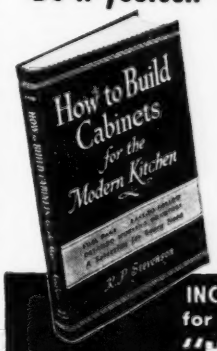
Ask your local lumber dealer for the woods of the Western Pines—he'll be glad to give you an estimate!

the Western Pines

* IDAHO WHITE PINE
* PONDEROSA PINE
* SUGAR PINE

TODAY'S WESTERN PINE TREE FARMING GUARANTEES LUMBER TOMORROW

"Do-it-yourself" KITCHEN CABINETS



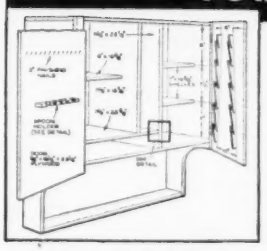
New book gives step-by-step directions, material lists, building pointers, "show-how" illustrations, for making every type of cabinet for the modern kitchen.

SAVE $500 OR MORE

Now you can SAVE HUNDREDS OF DOLLARS on kitchen cabinets! Build your own with the aid of this great new "do-it-yourself" guide. Tells everything you need to know. Large, clear drawings show every detail of construction. Easy-to-follow text gives valuable pointers to save work, save on materials, get a professionally-perfect job.

INCLUDES 70 TYPES OF CABINETS, plus dozens of ideas for ingenious labor-saving, step-saving kitchen units.

"HOW TO BUILD CABINETS FOR THE MODERN KITCHEN"



by ROBT. P. STEVENSON
Asst. Managing Editor, Popular Science

TELLS YOU HOW TO BUILD: Over-Refrigerator Cabinet, Over-the-Range Cabinet, Sliding-Door Cabinet, Adjustable Shelf Cabinet, Mix-Center Wall Cabinet, Over-the-Sink Cabinet, Wall Vegetable Bin, Tool Hanging Cabinet, Swing-Shelf Cabinet, Combination Sink Cabinet, Tray and Bread Cabinet, Platter Cabinet, Laundry Hamper, Screen-Bottom Vegetable Drawers, Pop-Up Mixer Shelf, Beside-the-Range Towel Rack, Rolling Vegetable Bin, Sink Pull-Out Racks, Revolving Wall Cabinet, Lifting-counter Cabinet, Pass-Through Serving Center, Canned Goods Storage Cabinet, Storage Wall, Folding Wall Table, Under-the-Counter Table, Curved-Seat Breakfast Nook, Snack Bar, Kitchen Desk, AND MUCH, MUCH MORE! FULLY ILLUSTRATED.

FREE 10-DAY TRIAL SEND NO MONEY.

See for yourself how this great new book helps you save money and gives you expert guidance on how to build your own kitchen cabinets. Mail coupon at right for free-trial copy. After 10 days' trial, keep it and pay only $4.95, plus few cents postage. Or return book and owe not a penny. MAIL COUPON NOW.

Simmons-Boardman Books, Dept. HHO-355
30 Church Street, New York 7, N. Y.

Send me for 10 DAYS' FREE EXAMINATION, "How to Build Cabinets for the Modern Kitchen." I will either return it in 10 days and owe nothing, or send only $4.95 (plus shipping charge) in full payment.

Name .....

Address .....

City & State .....

☐ SAVE! Send $4.95 with this coupon and we will pay postage. Same return and refund privileges.

Use Baker Brushes and you'll paint faster, easier, *better!* Brushes by Baker always pick up a full load of paint, so you dip less. Paint spreads more evenly with fewer strokes—you get *more* coverage.

Exteriors, interiors, furniture—you'll always get a smoother, more uniform looking job with Baker Brushes, precision-engineered for neat, clean, trouble-free painting. Next time you paint choose the right Baker Brush in the widest size practical for the job. The first few strokes will show you why Brushes by Baker are America's Finest Painting Tools.

SEND FOR FREE BOOKLET *"How to do a good paint job."* Send card (and name of retailer, if you wish) to Baker Brush Co., Inc., 83 Grand St., N.Y.C., 13.

BRUSHES by BAKER

ROLLERS, TOO!

AMERICA'S FINEST PAINTING TOOLS

It's New on the Market for the Workshop

Guide For Portable Drill

GUID-O-DRIL fits any portable electric drill; facilitates drilling or reaming true vertical or angular holes. Installs in a few minutes; rod and spring slipped off promptly when drill being used for other purposes. Also features built-in depth gauge. Retails at $6.95. For more information write Eagle Products, Box 84A, Meriden, Conn.

All In One Wood Tool

"Smoothy" removes several layers of varnish in less time without chemicals. For smoothing plaster, dry floors. Serves as a plane for fitting doors, storm windows, screens and plywood edges. Works equally well on straight or cross grain, hard or soft wood. Made of fine Swedish tempered steel. $1.00 from Fortune Laboratories, 1405 Maine Street, Des Moines, Iowa.

Starts Screws Straight

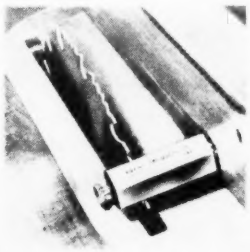
The Centerite speedily centers screws to hinges, escutcheon plates, handles, etc. Eliminates need for hammer and punch. The tapered nose automatically centers the tool to the hole. With hardware in position, Centerite is pressed. A sharp punch snaps against the wood, forming a perfect starting hole for the screw. Price $1.89. Robert H. Clark Co., 9330 Santa Monica Blvd., Beverly Hills, Calif.

Hacksaw With Tubular Steel Frame

Mitee-Cut's easily-adjustable hacksaw frame can be used with 9", 10" or 12" blades by just removing the thumbscrew and sliding the frame in the handle. Front and rear blade holder cannot fall out. Closed pistol grip gives maximum comfort and hand protection. Blade can be set to vertical or horizontal position. For further information write to Mitee Mfg., Inc., 1837 University Ave., St. Paul 4, Minn.

Miniature Spoke Shaves

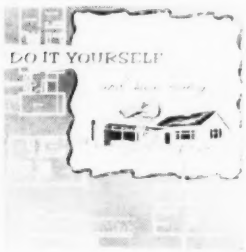
This new group of five miniature spoke shaves consists of flat bottom, round bottom and spoon bottom spoke shaves and flat and round bottom rabbet shaves. Spoke shaves are $3\frac{3}{4}$" long with 15/16" adjustable blade. Rabbet shaves are $2\frac{1}{4}$" long, with 15/16" blade open at both ends for easy access to the work in rabbetting. Spoke shaves $1.25 each, rabbet shaves $1.60 each. Additional blades 35c. Aldon Products, Box 74, Dept. 200, Detroit 24, Mich.



Tools Checks Fence Alignment

Fencealiner is a new tool to help in aligning saw fences. Eliminates the need for makeshift methods; anyone can use. Precision-made of aluminum; no moving parts. Lasts a lifetime. Price $1.00. Available by mail from Adams Products Co., Dept. P-16, 119 Ann Street, Hartford 3, Conn.

It's New on the Market for the Workshop



Do-It-Yourself Project Book

Do-it-yourself jobs become easier, and the likelihood of errors is reduced for the readers of Stuart S. Tate's new project book. Illustrates and describes all aspects of attic finishing, built-in cabinets, add-a-room, recreation room, kitchen remodeling, summer cottage and farm projects. Price 25c from the Boice-Crane Co., 993 W. Central Ave., Toledo 6, O.

New Line of Levels

The extruded M-D aluminum level just introduced by Macklanburg-Duncan comes in six sizes: 18", 24", 28", 30", 36" and 48". Prices range from $3.95 to $6.25. This is a heavy aluminum I-beam featuring lightness and sturdiness; non-breakable. Pyrex vials; extra large holes for hand-grips. Finished with bright, glossy red interior with silvery-satin top and edges. Made by Macklanburg-Duncan Co., Box 1197, Oklahoma City, Okla.

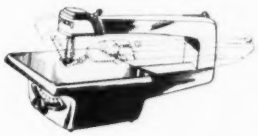
Magnetic Mitre For Compound Cuts

MAGNECUT makes it easier for the craftsman to cut compound angles. Cast from a high grade aluminum with all working parts of bright brass. Powerful Alnico-magnets hold saw at the proper tension at all times. All possible angles can be cut. A protractor adjustment for all horizontal angles (also vertical adjustments) 45° in either direction of 90°. Price $7.95. Made by Bay City Foundry, 133 North Avalon Blvd., Wilmington, Calif.

Power Wood Bit Set

The Snell Div., Parker Manufacturing Co., Worcester, Mass., introduces this 5-piece power wood bit set for home workshoppers. The hardened tool steel bits fit any ¼" drill or drill press. Designed for faster, cleaner boring in wood, plastics, panelboard, plaster and compositions. Case includes chrome-plated shank to lock bits firmly in place; wrench; ¼", ½", ¾" and 1" bits. Price $1.80.

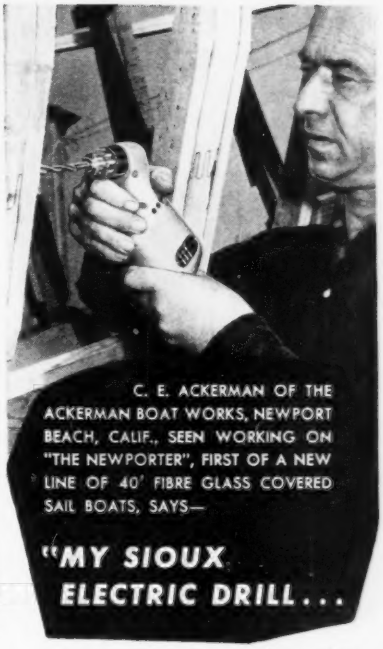
Jig Saw Tilting Arbor



The 65 pound No. 2500 Syncro Tilting Arbor Electric Jig Saw is the first self-powered jig saw to have the tilting arbor feature. Permits work to be held on horizontal surface while performing mortise or "angle" cuts. Has built-in blower, 20" throat clearance, working surface 12" x 15". Blade turns 90° in any direction for rip cuts. Price $59.95. Made by Syncro Corp., Dept. P2500, Oxford, Mich.

Power Saw And Nibbler Attachment

Hefty Holer fits any electric drill and weighs only 1¾ lbs. Will saw wood, plastic or plasterboard; cuts all metals in pipe, bar, tube, rod or sheet form without a starting hole; will nibble metal lath, wood, plastic composition material or sheet metal up to 20 gage, with only a ¼" starting hole. Accessory tools available include files, chisels, gouges and jig saw blades. Price $19.95. Little Beaver Industries, Inc., Willoughby, Ohio.



C. E. ACKERMAN OF THE ACKERMAN BOAT WORKS, NEWPORT BEACH, CALIF., SEEN WORKING ON "THE NEWPORTER", FIRST OF A NEW LINE OF 40' FIBRE GLASS COVERED SAIL BOATS, SAYS—

"MY SIOUX ELECTRIC DRILL . . .

. . . has given me such outstanding service, I feel that I owe the manufacturer a letter of appreciation.

"I purchased one of your ¼" all angle drills* in 1945, at which time, I also purchased two other Nationally known name drills. The Sioux Electric Drill has given continuous service since, and the first service work it has needed, is a set of brushes. The original brushes started arcing badly last week. The two other drills purchased at the same time, after several major overhaul jobs, gave out completely three or four years ago.

"In case you wish to use this letter in any way you feel it may be beneficial, please feel free to do so, and I would like anyone reading it to know that it was not, in any way, asked for or solicited."

*SIOUX ¼" ALL-ANGLE DRILL, NO. 1495, $37.90

¼" ELECTRIC DRILL

• Small design • Full Powered • Light weight • Permanently Lubricated • Pistol Grip

No. RC-1885—$22.95

COMPLETE DRILL TOOL SET

Includes ¼" drill and accessories for drilling, grinding, wire brushing, polishing, cleaning, etc.

No. RC-1822—$39.75

ORBITAL ACTION FLAT SANDER

Working at 4,000 cycles per minute produces finest finish on wood, metal, fibre—anywhere hand sanding is usually employed.

No. RC-1850—$45.80

HEAVY DUTY ELECTRIC SAW

Saw through 2x4's at a 45° angle with more blade to spare than with most 6" saws . . . that means more sharpenings, longer use from each blade! Modern, rugged, powerful!

No. RC-1806—$74.50

THE TOOLS THE PROFESSIONALS HAVE USED FOR OVER 40 YEARS.

Write for NEW Catalog ⟶

ALBERTSON & CO., INC.
SIOUX CITY, IOWA, U. S. A.

ELECTROPLATING *in the*

Copper and copper plated collections of pudding molds, Jello molds, pots, pans and kettles delight the housewife and make her kitchen more attractive. (This is the author's collection, pieces replated or reburnished by Spotswood.)

WHEN Marvin Spotswood of Los Gatos, California, set up a home workshop in his garage, people began beating a path to his door with items for him to plate with metal. A lamp base that was losing its finish, a pair of baby shoes, a tin pudding mold to be coppered and hung in all its beauty over the kitchen stove, wooden ash trays, hand-carved, to be preserved with a metal coating, and objects of plastic and other materials.

He liked the work, and they liked the results so much that they wanted to pay him for it. The refinishing and repairing of dented and broken silver appealed especially to Spotswood when he witnessed a lady's joy at having her grandmother's silver coffee service refurbished to look as good as new. He decided to open shop, and now is the town's Master Plater. He was good enough to list for us how the home electroplating workshop may be set up.

First of all, the workshop should be where children cannot go without supervision, because some of the acids and electrical processes are dangerous to the uninitiate. A garage or shed that can be locked is ideal, but they should have good ventilation. Cement floors with sewer drainage, and a double laundry tub with running water are extra features that will provide an A-1 working basis.

For the plating of many metallic and non-metallic objects you will need only one tank at first. Since cyanide copper is the base of most processes, and is used for all metallic object plating, it should be the first tank to be set up. (Acid copper is used for the non-metallic object plating and for slow processes, and may be set up in a different tank).

The tank should be of glass, such as a large aquarium or fish bowl, or it can be made of wood lined with lead, or be of enamelled iron, slate or even glazed earthenware. It should hold at least a gallon of the solution.

A rectifier—10 to 30 amperes—should be used for the current, since a battery will give only an hour or two of service. Three solid copper or solid brass rods will be needed to suspend the anodes and article being plated. The rods are placed across the top of the tank, and hooks made of solid copper or brass are used to hold the anodes and article suspended in the copper solution.

Insulators and a rheostat should be used. The insulators may be of fibre, Bakelite, plastic, or any non-conductor. You can get a rheostat from an old radio set; and it should drop voltage from the supply source down to $1\frac{1}{2}$ volts and must be able to carry from 6 to 10 amperes.

Other equipment to make electroplating easier will be a candy thermometer to test temperature of wax used in plating non-metallics, a small spray gun, wire scratch brushes, buffers, rubber gloves (important to wear when handling acids, also to keep article chemically clean while handling).

Chemicals needed may be purchased from a chemical supply house, drug stores, paint or hardware stores. Sulphuric acid, copper sulphate, liver of sulphur, paraffine wax (high grade), trisodium, muriatic acid, copper cyanide, sodium cyanide, sodium carbonate and others. These should be kept in a locked cupboard, away from children.

Anodes may be any sheet or plate stock or scrap of pure copper, if you are plating with copper. Total surface area of the anodes should be about twice the area of the largest article being plated in the tank.

A muriatic acid tank will be needed if it is necessary to strip or pickle scale or galvanized coating on steel or metal objects. Stripping must be done on anything that has other metal over its base metal, as everything but tin must be removed down to the base metal for perfect plating results. This tank should be of acid-resistant glass or pottery.

A tri-sodium tank for cleaning may be of metal and raised so that a gas-ring or

Home Workshop

By ALICE R. SHANNON

electric hot plate may be placed under it. Solution should be heated to 165 degrees F. or more. Thermal heat electrodes may be obtained through electrical equipment companies for this purpose, if you wish.

For rinsing, which is done after each process both for stopping acid action and for cleanliness, you will need cold running water. Double laundry tubs complete with faucet fixtures would be ideal for this, as one side could be used for a hot water rinse (best for final rinsing). A heavily galvanized, non-rusting wash tub to which a spray hose can be run will serve, however.

A revolving table or piano stool near a fan is good to have for quick-drying processes, and also for spraying or coating an object with lacquer. A locked chest or cabinet is recommended for chemical supply storage as mentioned before, for many of the chemicals are poisonous.

Cola bottle lamp would delight any teen-ager. (Copper plated.)

New tin pan does not need stripping process, but should be thoroughly scrubbed in trisodium bath. Note electroplaters' long, heavy rubber gloves for working in acids.

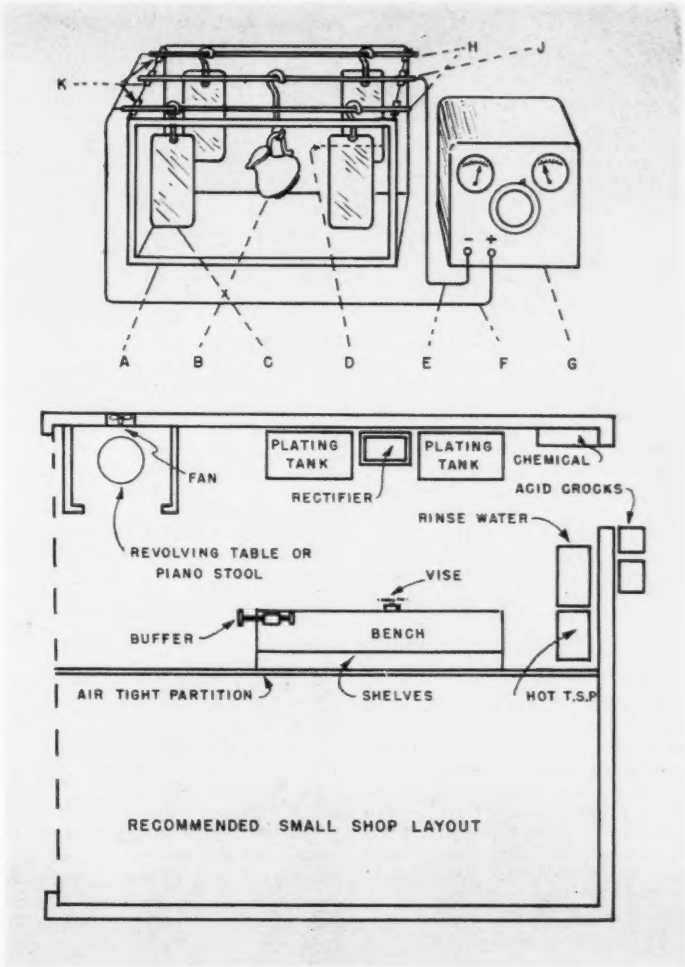
Copper Plating

An interesting first object to electroplate is a copper pudding mold. Get a tin pan from the dime store, or use an old one. Do not get aluminum, as it will burn dangerously in acid and decompose. Tin will answer to a small magnet, if you are not sure about it. Anything else should have a base metal of steel or ferrous (iron) metal. A tube pan with a fluted edge was used by Spotswood, purchased for 39 cents from the dime store.

FIRST STEP: Stripping. If the pan is covered with a coating of galvanized metal, the coating must be removed down to the base metal by soaking it in a tank or container of glass or pottery (acid-resisting material) holding a muriatic acid solution. (Muriatic acid solution [hydrochloric acid] is made by adding $1\frac{1}{2}$ gallons muriatic acid to $\frac{1}{2}$ gallon of water. This may be made stronger or weaker by adding more or less acid.) The length of time for soaking varies according to the thickness of the coating, but it usually can be considered finished when the acid stops bubbling. (This step is not necessary if the pan is new.)

This also is the first step in cleaning the rust off steel. Rubber gloves should be worn at all times when handling acids. After the stripping process is completed, remove the article and rinse with clear water, preferably running water. The rinsing halts the acid process; just removing from acid will not stop the stripping, but rinsing off in running water does.

SECOND STEP: Grinding. If the article to be plated is old and has scratches on the base metal, it must be ground and polished on a buffing wheel until it is smooth and flawless. If this is not done, the imperfections and scratches will show up clearly in the copper coating. If, as in this case, a new pan is purchased, it is well to polish the pan anyway in order to assure a more perfect plating result.



ELECTROPLATING *in the*

Copper and copper plated collections of pudding molds, Jello molds, pots, pans and kettles delight the housewife and make her kitchen more attractive. (This is the author's collection, pieces replated or reburnished by Spotswood.)

WHEN Marvin Spotswood of Los Gatos, California, set up a home workshop in his garage, people began beating a path to his door with items for him to plate with metal. A lamp base that was losing its finish, a pair of baby shoes, a tin pudding mold to be coppered and hung in all its beauty over the kitchen stove, wooden ash trays, hand-carved, to be preserved with a metal coating, and objects of plastic and other materials.

He liked the work, and they liked the results so much that they wanted to pay him for it. The refinishing and repairing of dented and broken silver appealed especially to Spotswood when he witnessed a lady's joy at having her grandmother's silver coffee service refurbished to look as good as new. He decided to open shop, and now is the town's Master Plater. He was good enough to list for us how the home electroplating workshop may be set up.

First of all, the workshop should be where children cannot go without supervision, because some of the acids and electrical processes are dangerous to the uninitiate. A garage or shed that can be locked is ideal, but they should have good ventilation. Cement floors with sewer drainage, and a double laundry tub with running water are extra features that will provide an A-1 working basis.

For the plating of many metallic and non-metallic objects you will need only one tank at first. Since cyanide copper is the base of most processes, and is used for all metallic object plating, it should be the first tank to be set up. (Acid copper is used for the non-metallic object plating and for slow processes, and may be set up in a different tank).

The tank should be of glass, such as a large aquarium or fish bowl, or it can be made of wood lined with lead, or be of enamelled iron, slate or even glazed earthenware. It should hold at least a gallon of the solution.

A rectifier—10 to 30 amperes—should be used for the current, since a battery will give only an hour or two of service. Three solid copper or solid brass rods will be needed to suspend the anodes and article being plated. The rods are placed across the top of the tank, and hooks made of solid copper or brass are used to hold the anodes and article suspended in the copper solution.

Insulators and a rheostat should be used. The insulators may be of fibre, Bakelite, plastic, or any non-conductor. You can get a rheostat from an old radio set; and it should drop voltage from the supply source down to $1\frac{1}{2}$ volts and must be able to carry from 6 to 10 amperes.

Other equipment to make electroplating easier will be a candy thermometer to test temperature of wax used in plating non-metallics, a small spray gun, wire scratch brushes, buffers, rubber gloves (important to wear when handling acids, also to keep article chemically clean while handling).

Chemicals needed may be purchased from a chemical supply house, drug stores, paint or hardware stores. Sulphuric acid, copper sulphate, liver of sulphur, paraffine wax (high grade), trisodium, muriatic acid, copper cyanide, sodium cyanide, sodium carbonate and others. These should be kept in a locked cupboard, away from children.

Anodes may be any sheet or plate stock or scrap of pure copper, if you are plating with copper. Total surface area of the anodes should be about twice the area of the largest article being plated in the tank.

A muriatic acid tank will be needed if it is necessary to strip or pickle scale or galvanized coating on steel or metal objects. Stripping must be done on anything that has other metal over its base metal, as everything but tin must be removed down to the base metal for perfect plating results. This tank should be of acid-resistant glass or pottery.

A tri-sodium tank for cleaning may be of metal and raised so that a gas-ring or

Home Workshop

By ALICE R. SHANNON

electric hot plate may be placed under it. Solution should be heated to 165 degrees F. or more. Thermal heat electrodes may be obtained through electrical equipment companies for this purpose, if you wish.

For rinsing, which is done after each process both for stopping acid action and for cleanliness, you will need cold running water. Double laundry tubs complete with faucet fixtures would be ideal for this, as one side could be used for a hot water rinse (best for final rinsing). A heavily galvanized, non-rusting wash tub to which a spray hose can be run will serve, however.

A revolving table or piano stool near a fan is good to have for quick-drying processes, and also for spraying or coating an object with lacquer. A locked chest or cabinet is recommended for chemical supply storage as mentioned before, for many of the chemicals are poisonous.

Cola bottle lamp would delight any teen-ager. (Copper plated.)

New tin pan does not need stripping process, but should be thoroughly scrubbed in tri-sodium bath. Note electroplaters' long, heavy rubber gloves for working in acids.

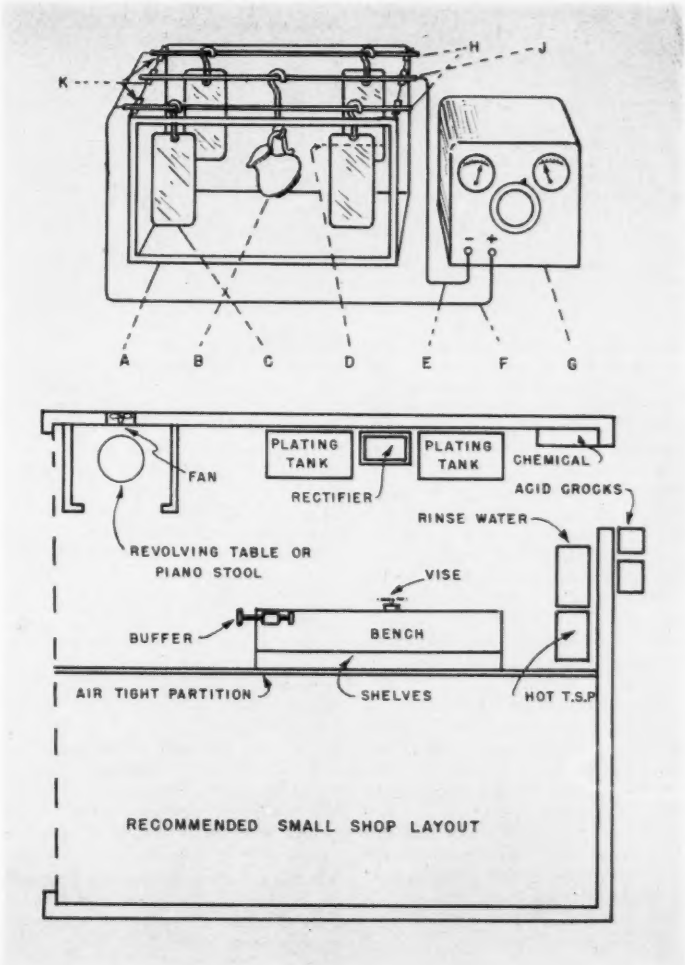
Copper Plating

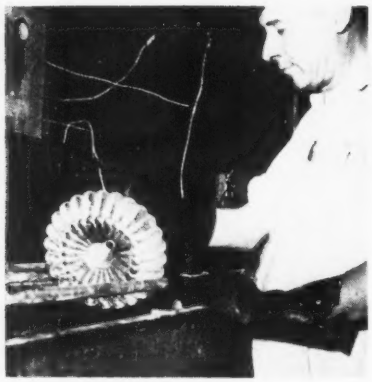
An interesting first object to electroplate is a copper pudding mold. Get a tin pan from the dime store, or use an old one. Do not get aluminum, as it will burn dangerously in acid and decompose. Tin will answer to a small magnet, if you are not sure about it. Anything else should have a base metal of steel or ferrous (iron) metal. A tube pan with a fluted edge was used by Spotswood, purchased for 39 cents from the dime store.

FIRST STEP: Stripping. If the pan is covered with a coating of galvanized metal, the coating must be removed down to the base metal by soaking it in a tank or container of glass or pottery (acid-resisting material) holding a muriatic acid solution. (Muriatic acid solution [hydrochloric acid] is made by adding 1½ gallons muriatic acid to ½ gallon of water. This may be made stronger or weaker by adding more or less acid.) The length of time for soaking varies according to the thickness of the coating, but it usually can be considered finished when the acid stops bubbling. (This step is not necessary if the pan is new.)

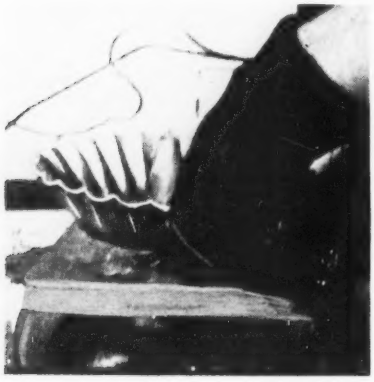
This also is the first step in cleaning the rust off steel. Rubber gloves should be worn at all times when handling acids. After the stripping process is completed, remove the article and rinse with clear water, preferably running water. The rinsing halts the acid process; just removing from acid will not stop the stripping, but rinsing off in running water does.

SECOND STEP: Grinding. If the article to be plated is old and has scratches on the base metal, it must be ground and polished on a buffing wheel until it is smooth and flawless. If this is not done, the imperfections and scratches will show up clearly in the copper coating. If, as in this case, a new pan is purchased, it is well to polish the pan anyway in order to assure a more perfect plating result.

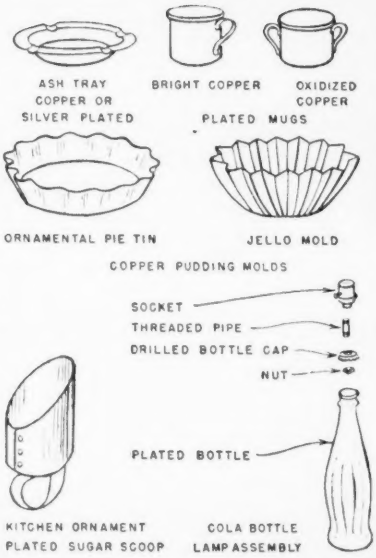




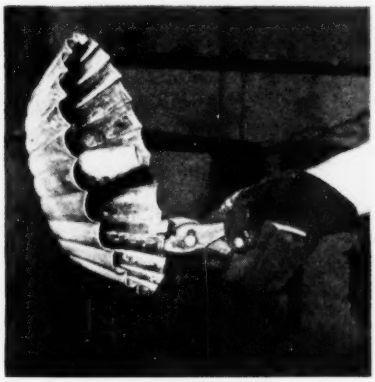
Tube pan is easily secured by copper wire hook for immersing in copper solution.



Inside surface of pan must be tinned if it will be used for cooking purposes. Pan must be heated over gas flame, solder melted and brushed on copper surface. (Slight fuzziness caused by plater's constant movement of pan over flame.)



After plating, pan is lacquer-sprayed if to be used for decoration only. Spray gun is held away from face, as solution is poisonous to breathe, also kept away from any flame as lacquer spray is highly inflammable.



Completed tin pan (cost 39 cents) is now a beautiful tin-lined copper mold worth $3.50 to $5.00.

Rinse in cold running water after grinding.

THIRD STEP: Tri-sodium bath. This is a cleaning and de-greasing process. The tri-sodium solution is prepared in a steel tank or vessel which can be heated over a flame to a temperature of about 165 degrees F. To make the solution add powdered tri-sodium to the heated water until the water feels slick to the touch. Rinse the hand off in cold water after having exposed it to the solution. Immerse the pan and when it is as hot as the solution is, remove it, using rubber gloves or tongs, and brush with a stiff brush. Do not handle with bare hands after this step, so as to maintain chemical purity and to assure perfect plating results. Rinse in cold running water to stop action.

FOURTH STEP: Sour dip. Prepare an acid-resistant tank or crock with a 10% solution of sulphuric acid and water. Care must be used in mixing this as acid will cause the water to boil and the fumes are dangerous to breathe. It is best to mix this in the open air and to be careful not to breathe fumes or allow fumes to reach the eyes. Using one part of sulphuric acid to nine parts of water, add the acid to the water a few drops at a time.

Dip the article, remove quickly and rinse with cold running water. The sour dip is for additional chemical cleanliness, very important in plating.

FIFTH STEP: Plating. A cyanide copper solution is to be used for this pudding mold, as it is a faster process than the slower acid copper used in non-metallic and slow coppering processes. The solution should be mixed in the plating tank of steel or acid-resisting material. This is a cyanide, dangerous to handle and to breathe, so mix it in the open air or in a well ventilated room. For a one gallon solution add 3 ounces of copper cyanide, 4 and 5/10 (4.5) ounces of sodium cyanide, and 2 ounces sodium carbonate to one gallon of water. Solution should be kept at a temperature of 75 to 100 degrees F. and a voltage of 1.5 to 2 volts used.

The anodes should be of rolled annealed copper, and their surface per square inch should be double the surface per square inch of the article to be plated. Hang the article in the plating tank with a copper wire from the cathode rod (also copper) over your tank. Be sure that the pan is completely covered with the solution. See that the wire makes a good electrical contact with the plating rod. After one or one and a half hours in this copper tank, with the plating voltage set at one and a half to two volts, the pan should be well covered with copper.

SIXTH STEP: Finishing. Rinse the article in clear water, still using rubber gloves to avoid handling the cyanides. Polish the pan with a medium soft brass-wire scratch brush (not steel-wire). This removes any oxidation which may have begun in the tank and which looks like a pinkish coating on the plating. Keep the article wet with clear water while scratch brushing. Rinse again with clear water, then dry thoroughly. Finish polishing with a loose cotton buffing wheel coated with black emery abrasive compound (Black Tripoli).

If the article is to be used decoratively (as in this case) it is best to lacquer with clear lacquer in order to preserve the finish, otherwise it will blacken rapidly. If it is to be used for cooking, it must have a tinned surface inside.

To tin the surface, do not lacquer. Heat the pan over low heat, just hot enough to melt solder. Use 50-50 grade or better solder. When it is at the flow stage, use a sponge or brush and cover the inside surface of the pan, painting it on, keeping it over the heat. The tin will adhere to the heated copper, and all excess material will stick to the brush or sponge. When the surface is completely covered, remove from the heat and pour off any residue.

Nickel Plating

The home electroplater often likes to try his hand at nickel plating plumbing fixtures and other household objects, such as water faucets, cupboard handles, door knobs, light fixtures, towel rods, hangers, and so on. The following method is used:

The same tank set up as for cyanide copper plating, with the addition of another tank holding the nickel solution. This is decorative bright nickel, not heavy-duty stuff.

STEP ONE: Stripping the object in muriatic acid tank. Rinse.

STEP TWO: Grinding. Be sure of a smooth, unblemished surface. Rinse.

STEP THREE: Tri-sodium bath, heated to 160 degrees F. Rinse.

STEP FOUR: Sour dip. Dip, remove, rinse with cold water.

(*Continued on page* 240)

HOBBY AT A PROFIT:

LINOLEUM BLOCK ART

By ROBERT F. BURGESS

Grid pattern for dolphin design may be enlarged proportionately by copying the same number of 1" squares, similarly placed, on tracing paper. Draw outline of design and details from smaller square areas to larger corresponding square areas.

In an evening Mrs. E. W. Scarborough can carve and print an interesting linoleum block painting at her "table-top studio."

IF you've ever looked at a painting and wished you were the artist, or tried to paint pictures but lacked the talent and ability, then linoleum block art is for you. It requires no especial talent and relatively little time. In an evening you can complete a professional-looking painting—and make as many duplicates of it as you wish. Not only will the hobby provide you with enjoyment, but it easily can become a profitable one. Your linoleum block paintings never may attain art gallery distinction, but some have been known to bring upwards of $20 apiece when handled on a consignment basis in local gift shops.

Mrs. E. W. Scarborough of Chattahoochee, Florida, deserves the credit for elevating linoleum block art from the printing on paper stage to the painting on fabric stage. Although she still makes a great many of her personalized Christmas cards, her major interest is working on fabrics. Her original designs decorate table cloths, napkins, sport shirts and tapestries—all from hand-carved linoleum blocks. You can do the same.

The only materials you will need to get started are a few sheets of linoleum large enough to hold your design. Most suitable is that which does not have a hard, shiny finish, although the other type will work equally well. A number of wooden blocks for mounting the pieces of linoleum; they should be at least 2" thick. Segments of 2 x 4 work well for the smaller designs. For printing on fabrics you will need a small set of textile paints and a soft-bristled water color brush, printer's inks, a photographer's rubber roller if you are printing on paper. A pair of scissors, tube of Duco cement, and a mirror or sheet of plate glass, a sharp-bladed knife or model-cutting tool. Most items are obtainable at craft and hobby shops.

This article will detail the making of a design from a magazine illustration—a leaping dolphin. You can use almost any drawing or picture, or may create your own, as long as there are not too many details and the design is fairly geometrical.

TRACING AND CUTTING: The design was traced on the linoleum by using carbon paper (Fig. 1). The outline then was darkened with a pencil and was cut out as shown in Fig. 2. Be especially careful not to bend or break the projecting fins.

MOUNTING: The linoleum design is glued to the wooden block with Duco cement. If you turn the block linoleum-side down and stack several heavy books atop it, the design will adhere much more securely. Allow time for the glue to set.

CARVING: When carving the linoleum with your knife, use a see-saw motion of the blade while pressing down. Cut out all the details as in Fig. 3, making each line at least 1/16" wide and as deep as the linoleum is thick.

INKING: If you wish to print on paper with printer's ink and a single color effect, spread some of the ink on your glass palette and roll it into a thin film, using the photographer's roller. This in turn is applied to the surface of the linoleum block as shown in Fig. 4. The inked block then is pressed flat on the paper and immediately removed for a clear print.

PAINTING: For painting on fabrics, a somewhat different procedure is used. Thin the textile paint according to instructions. Paint it directly onto the linoleum design in wide ribbons of pure color. Don't worry about blending the colors, and work fast because the pigments dry quickly (Fig. 5). All areas must be completely covered with fresh paint.

(*Continued on page* 250)

FRONT SECTION (TOP HALF)
FROM $\frac{3}{16}$" BIRCH PLYWOOD. GLUE TOGETHER

FULL SIZE PLAN

SIMPLE STAND FRAME FOR A FAVORITE PORTRAIT

By DICK HUTCHINSON
Associate editor

HERE is an attractive stand frame which anyone can make. Any wood may be used. However, the contrast between the black walnut stand and the selected birch plywood frame produces a beautiful effect.

Cut out the two pieces for the frame, selecting a piece with a prominent grain design for the face piece. Glue the two together with one of the new white glues, and clamp to dry.

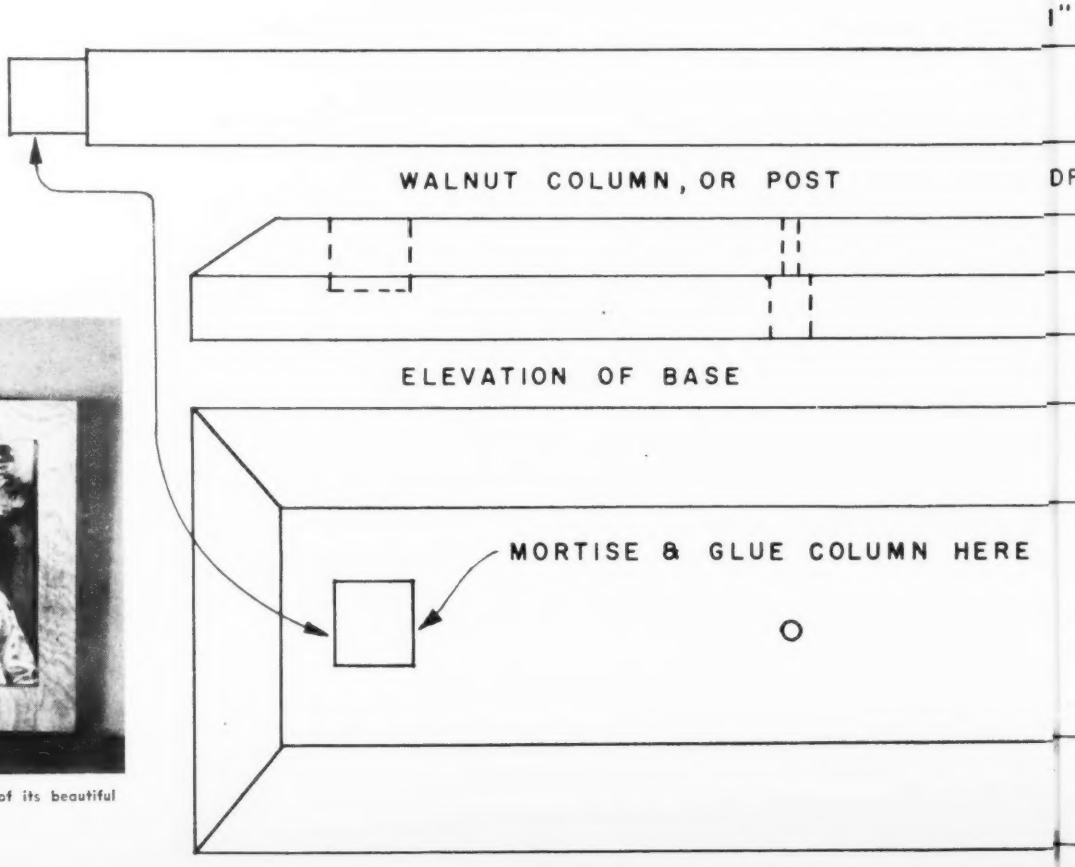
The base is cut from ¾" black walnut. The beveled top corners are cut on the tilt arbor bench saw. The ½" square mortise is chiseled out to receive the tenoned column, which is glued in. Drill and counterbore for assembling with the frame.

Set the tilt arbor saw and make an 89° cut across the bottom of the frame, so that when it is assembled with the base it will lean back slightly.

Coat the bottom of the frame and the left side edge with the glue, set in position on the stand, and draw tight with the wood screws.

Sand smooth all over. Then rub a coat of linseed oil over all of the walnut surface and let dry. Next apply two succeeding coats of transparent lacquer to both

The finished frame is worthy of its beautiful picture.

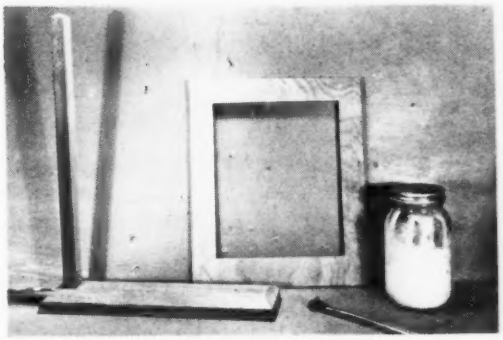


BACK SECTION (TOP HALF)

$\frac{1}{4}$" PLYWOOD

$\frac{1}{4}$" NO. 1 SCREWS

20 GAGE LUG FOR HOLDING PICTURE IN FRAME. MAKE 4, COPPER.



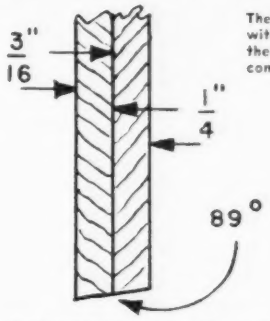
The base assembled with the column, and the frame ready to complete the assembly.

frame and stand, rubbing down gently with fine steel wool between coats.

Glue a piece of felt, or black Canton flannel to the bottom of the base to prevent scratching whatever furniture it is set out on.

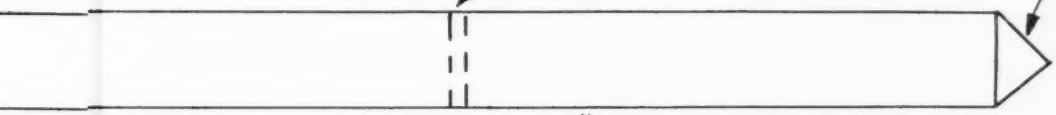
Cut and drill the four copper lugs, and attach with the wood screws. Set the glass and the picture in position, and insert a piece of heavy cardboard for a backing. Turn the lugs to hold all in place.

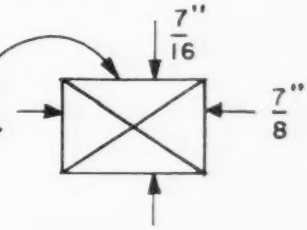
This particular frame is made to take a standard 6" x 8" portrait. Any size frame may be made in the same design if the dimensions are altered to increase or reduce its size as needed.



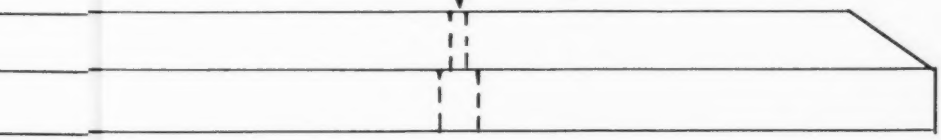
BOTTOM EDGE OF ASSEMBLED FRAME

1" NO. 5 BLUED SCREW



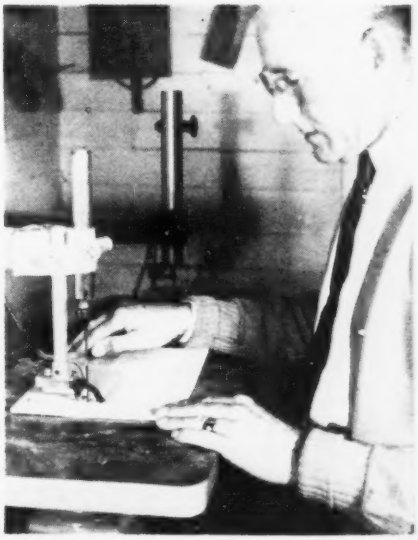


DRILL & COUNTERBORE FOR $\frac{3}{4}$" NO. 4 WOOD SCREWS



HERE

TOP VIEW OF WALNUT BASE



Sawing out the plywood frame on the jig saw.

ST. PAUL MAN CARVES 300 WOODEN HORSES

By KEN BERGLUND

The St. Paul hobbyist indicates four different stages in the carving of a model horse. First, the model is sawed on a band saw and then is worked into shape with a jack knife, Xacto knife and sandpaper before the final paint is applied.

MORE than 300 wooden Percheron and Belgian horses have been carved by Joe Ganas of 973 Galvin Avenue, St. Paul, Minnesota; but the prize-winning hobbyist has never owned a horse in his life. One of the most skilled craftsmen of this type in the country, Ganas has picked up many ribbons at fairs and hobby shows. His models are so prized they are used as trophies each year at the Minnesota State Fair in the Belgian and Percheron horse judgings.

An admirer of horses since boyhood, Ganas has been carving them from wood since 1939. He first modeled a few horses in clay as a favor to his daughter but then he became so interested he started whittling them out of wood. His greatest pride is a life-like six team hitch, a replica of the famous Anheuser-Busch beer wagon. Ganas has captured the movement and power of the horses that draw this famed parade unit and the display has attracted much attention wherever it has been shown. It won a sweepstakes award at the 1944 Minnesota State Fair.

The beer wagon rig is a carefully worked out model, built entirely to scale. Each horse was carved from a solid block of three-inch thick redwood and measures 6½" from hoof to ear. The harness was built of leather scraps. Ganas patiently assembled the harness chain himself, link by link, when he was unable to locate ready-made chain of the proper scale.

The wagon is an excellent model in its own right. Made of hard maple, the wagon has springs taken from an old clock, and its accessories are copied faithfully from the beer wagons of yesterday. Two carved riders ride proudly on top. The entire rig measures four feet from lead horse to tail gate and was painted with oil paints similar to those used by artists.

A jack knife is one of Joe Ganas' main tools.

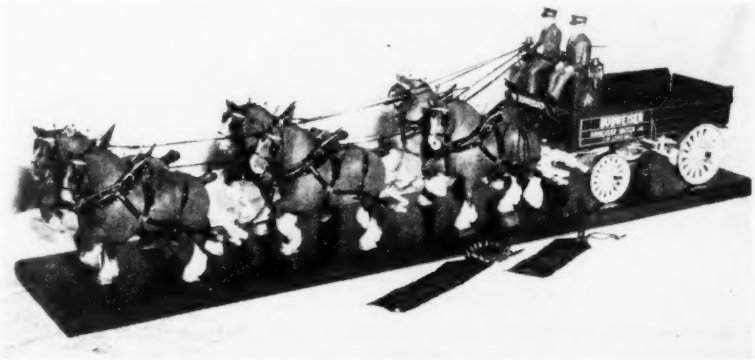
A motor driven router saves a lot of time in paring away excess wood.

Other elaborate Ganas models include five additional six-team hitches, a stallion cart and a two horse rig patterned after a cart used in Holland.

In carving his horse models, the St. Paul roofing contractor works from pictures and first cuts a paper pattern of the animal to be carved. Using a block of soft wood, he band saws the model roughly to shape and then goes to work with a jack knife, Xacto knives and a motor driven router.

The models are finished with sandpaper,

(*Continued on page* 252)



This rig has won many awards at hobby shows and fairs.

DON'T LET THIS LAMP PROJECT STUMP YOU!

By ELMA WALTNER

WANT something different in the way of a lamp? Then make this "hollow stump" lamp with its occupant, a beady-eyed owl. It is especially suited to a den or study, recreation room or children's room.

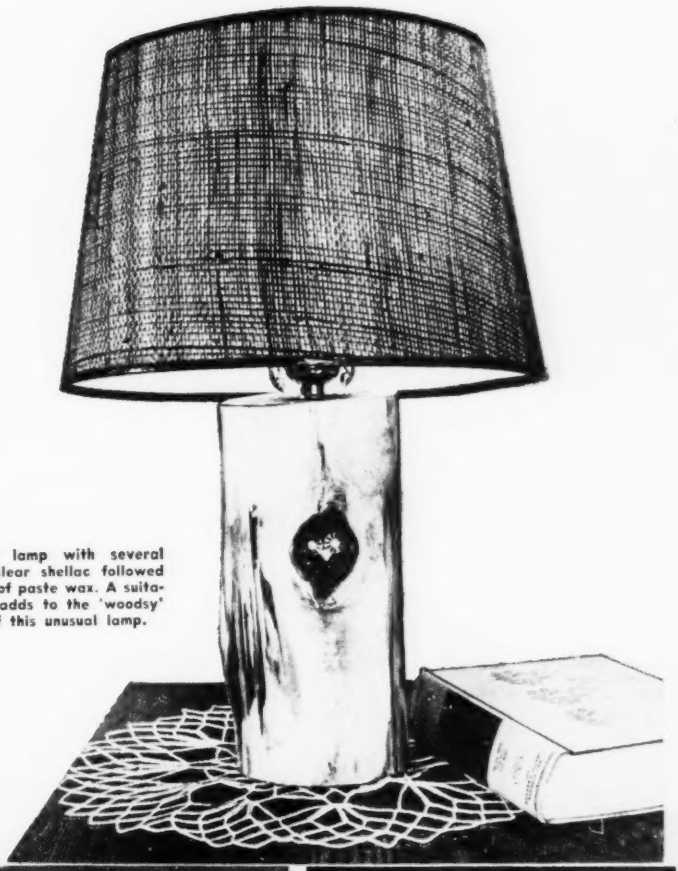
For the lamp base, a white cedar post section is used. Check over the posts in your lumber yard and choose one that has a bumpy knot section which may be shaped and hollowed out to make the domocile for Ole Owl. Saw a 10" length containing the knot, from the post. The top of the knot should be about 2½" from the top of the section. A good thickness for this section is around 5". This makes a well proportioned 'stump' for the height of the section.

With a knife or carving chisels, shape the 'stump to make the hump containing the knot quite bumpy and prominent. Now hollow out the knothole to a depth of about 1". A round end carving chisel is a good implement for this job, but it can be done with brace and bit and a common pocket knife. Smooth the entire section of post and the knothole with sandpaper.

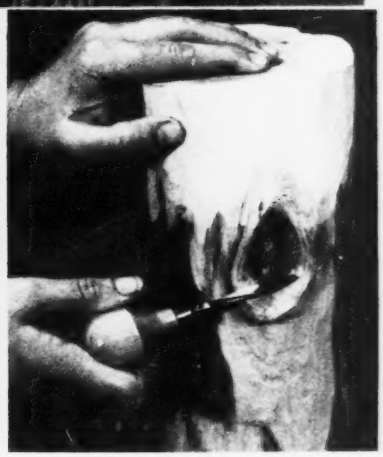
Lamp fittings needed are a common screw-on socket with 'push through' switch, a harp for holding the shade, lamp shade, length of electrical cord and a plug. A piece of threaded quarter inch pipe, 2" long, also will be needed.

Drilling not difficult

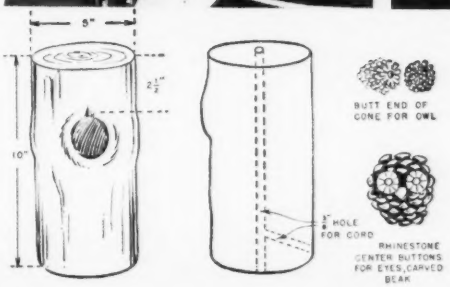
Use a ⅜" drill to bore a hole through the length of the center of the 'stump' lamp column. If you haven't an extention bit, the hole can be drilled halfway through the column working from each end. Drill a second hole from the back of the stump to slant upward and meet the center hole. This second hole should be started about ½" above the base of the column. Next, thread the electrical cord through the hole, beginning at the back bottom and pushing it up until it comes out the opening at the top of the column. Draw the cord up several inches above the top of the column and slip the length of threaded pipe onto the cord. Tap the pipe down into the hole in the column until only enough of the thread remains above the column to allow the socket to be screwed into place. (There are two types of harps; one of them fits under the socket, the other screws to the threads at the top of the socket. If the former type is used, it must be fitted over the pipe before the base of the socket is screwed into place.) Separate the two parts of the socket, screw the base part to the pipe, then fasten the ends of the electrical cord into place and snap the two parts together. The cord will need to be pulled down to bring the two parts together.



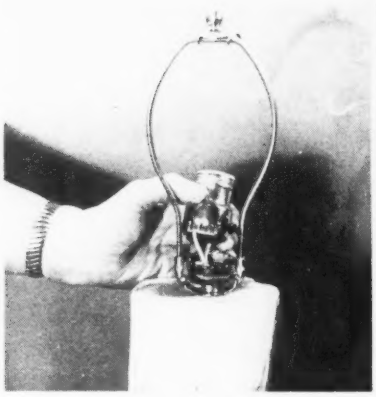
Finish the lamp with several coats of clear shellac followed by a coat of paste wax. A suitable shade adds to the 'woodsy' effect of this unusual lamp.



Drill hole through center of column and a second hole, on a slant, from back of column to meet center hole. Thread lamp cord through this slant hole and up center hole, bringing it several inches above top of column. Slip threaded pipe over cord and tap down into hole until only enough thread remains to allow socket to be screwed in place.



Shape lamp column to make knot hole 'hump' prominent. Hollow out inside of knot to a depth of about 1" to give the 'hollow stump' illusion when the owl is in place.



Slip harp onto pipe. Separate the two parts of the socket and screw the base in position. Attach the ends of the electric wire to the upper part of the socket, then snap the two parts of the socket together.

Make the owl from the butt end of a hard pine cone, a couple of rhinestone centered buttons and a carved beak. Glue him into the stump opening.

The owl comes next. He is made from a pine cone, a couple of buttons and a whittled beak. Use a hard cone and snip off the butt end. Clip away portions of the cone to get the desired shape and size to fit into the knothole. Small buttons with rhinestone centers are ideal for eyes for they gleam and flash as the light hits them. Glue the buttons into place. Whittle the beak from white pine and glue in place. Slip the owl into the knothole and fasten with glue. He should be positioned just inside the opening so that he appears to be looking out of the hollow stump, but not so far in that he is in shadow.

How to finish

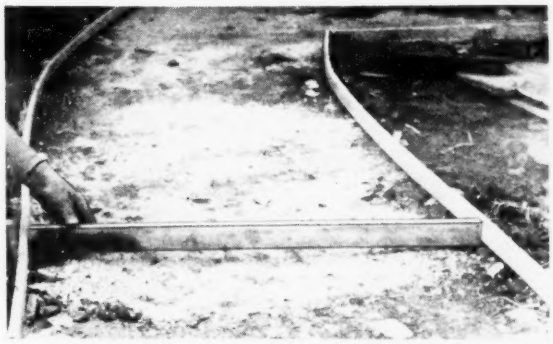
Several coats of clear shellac, then a waxing with paste floor wax, give an attractive glossy finish to the stump lamp base. A lampshade with a 'rustic' type of finish is desirable, being in keeping with the base. A suitable shade adds a great deal to the effectiveness of the lamp, and since shades are available in great variety one which matches the base usually can be located. If desired, a plain shade can be wrapped with manila package wrapping cord.

Picture Story:

DOES YOUR GARDEN NEED A WALK?

Try making it of slate, slab rock or tile

By GEO. D. YOUNG



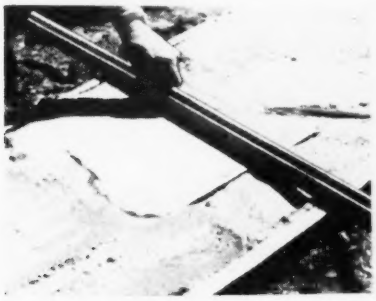
(1)—Level ground to approximate width and proper grade. An ordinary garden walk is 2 ft. wide, an entrance walk averages 30" to 3 ft. Stake down one side. With spacer, stake down opposite side, leveling across with a longer strip. Water and tamp down thoroughly. This will leave room for about 2½" or 3" of cement.

(2)—Chip slate or rock to size by placing on a heavy block and tapping with a hammer. Fit pieces for area.

(3)—Cement mixture: 3 shovels of quartersand to 1 of cement. Water to stiff mix. Mix only two wheelbarrows at a time.

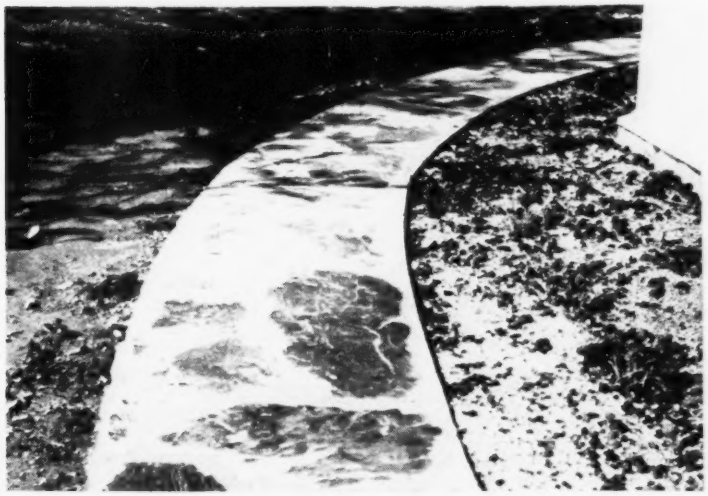
(4)—Settle slate into cement with weight of body and hand. Allow ¾" average space between slabs, and a 1¼" space at the edge.

(5)—Fill in between pieces and scrape off surplus.



(6)—Tap down each piece, using a straight edge to secure uniform surface.

(7)—When cement is quite firm, sweep with a broom across the joints, leaving joints flush with the face of the slate or tile. After it has set for about two hours, clean off each piece of slate with a broom dipped in water.



(8)—In about 48 hours the white cement deposit around the edges of the slate can be washed off. The wood strips can be taken off in about three days.

PLASTICS AND PLASTIC WORKING

A colloid-treated fabric Celastic developed as a stiffner for shoe toes is finding many widely-different uses in a variety of industries, since it acts somewhat like a plastic in many respects. Essentially a cotton fabric impregnated with cellulose nitrate and a fire-retardant, it becomes limp on application of a suitable solvent and can be shaped over male dies. When solvent evaporates it hardens to a strong light-weight material as hard as wood. It is replacing wood for pattern-making, is being used for masks, helmets, leaves, flowers, ribbons, bells, many automotive display and orthopedic devices.

Turn your attic into an extra room!

Modernize with Marlite PLANK and BLOCK

Need more room in your home for guests or that growing family? Here's an economical do-it-yourself idea. Finish off your attic with new Marlite Plank and Block. This beautiful, prefinished paneling goes up fast with easily applied clips. An exclusive tongue and groove joint conceals all fastening.

Marlite's soilproof baked finish cleans with a damp cloth; never needs painting. Ten lovely "companion colors" styled by Raymond Loewy Associates, plus 4 distinctive wood patterns, will suggest hundreds of smart decorating schemes. Planks (16" x 8') and Blocks (16" square) are packaged in convenient carry-home cartons. See your building materials dealer or mail coupon for free folder.

MARLITE PLANK AND BLOCK PATENT APPLIED FOR

Marlite®
PREFINISHED
WALL and CEILING PANELING

MARSH WALL PRODUCTS, INC.
Dept. 319, Dover, Ohio
Subsidiary of Masonite Corporation

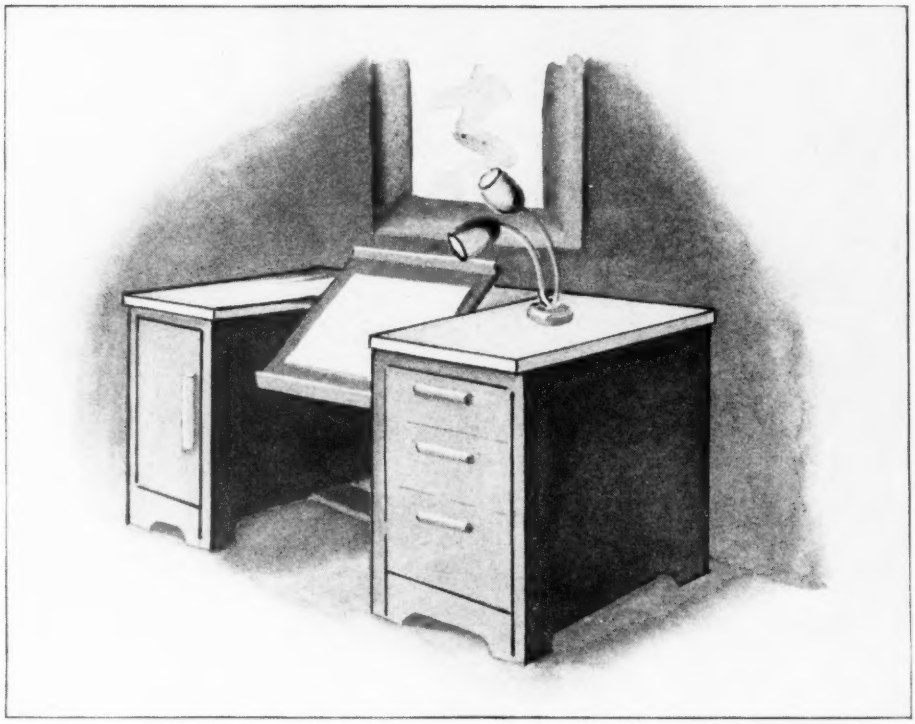
By return mail please send free folder showing how I can modernize with new Marlite Plank and Block.

NAME _____

ADDRESS _____

CITY _____

STATE _____



We dare you not to like this piece of "working" furniture:

CONVERTIBLE DESK

By BILL DYE

THIS desk was designed originally for the combination artist-draftsman, and will fit well with any room decor.

Preliminary instructions are as follows: If the home workshopper is experienced in working with plywood—fine; if not, care should be exercised throughout fabrication. Maximum care must be used in fitting out the mortised-tenoned joints. Sandpaper each edge before assembly for close seam and joint matching.

The selection of materials is strictly a matter of personal preference or of what is available. We suggest a blond wood, and it is not necessary to buy the more expensive types. A grained wood that has a quality surface on one side will produce as good a finished job as the most expensive wood. The type of wood, of course, should fit your present decor. Consult your lumber dealer; he'll gladly advise you.

Preparing Panels

Cut the panels from ¾" plywood. The rear panel is 29¼" x 51½". The side panels are 29¼" x 27½" (Fig. 4). At the bottom edge of each panel mark a 2" radius, using a point 2", 4" and 6" (Fig. 4) as noted, from the outer edge of each panel as radius point. Mark from one radius to the other on the panels and cut out the two-inch section. This will form the legs of the desk (Fig. 4). A ¼" tenon, extending ½", is cut on the sides of the panels. Kerf from the good side of the wood (Fig. 3).

The inner panels are 27½" x 29¼". A 2" radius is cut on the front edge only. Cut from this radius to the back of the panel, removing the 2" section. The front edge only of the center panels is tenoned. Notch the bottom edge of each panel ½" x 2" to receive the bottom brace (Fig. 1).

Two 1" strips of ¾" plywood will be required for the upper front panels. The right side is 14" long and the left is 9" long. The lower panels are 4" high and two will be required of the same length as the upper panels. Mark a radius on the lower panels just as on the side panels and cut this section out. The sides of both upper and lower panels are tenoned, as were the side panels (Fig. 4).

Supporting and Bracing

The corner and front supports are made of 1½" square stock, cut to 29¼" lengths. Six will be required. The two rear corner supports are mortised ¼" x ½" deep their entire length on two adjacent sides, to receive paneling (Fig. 3). The right support is notched ½" at 5", 13", and 25" from the top to receive drawer runners (Fig. 1). The front end corner supports are mortised the entire length of one side only. An adjacent side is mortised 1½" down from the top, and 4" up from the bottom (Fig. 1). The two inner supports are made in the same manner as the front corner supports. The right inner and right corner front supports are notched for drawer runners (Fig. 1).

The back inner braces are made of 1" x 2" stock cut to length. Two are required. They are mortised ¾" x ½" down the entire length of one side to receive the inner panels. Rout the right support for drawer runners (Fig. 4).

The back "X" brace is made of 1 x 2 stock cut to lengths as required by the angle lay. Two are required. They are lap-jointed at center for flush mounting (Fig. 4).

The back corner supports are joined to the back panel. Glue and drive nails

from the inside. Front corner supports are attached to the side panels and the inner supports to the inner panels in the same manner.

Preliminary Assembly

Install the inner braces. The brace that is notched is to be placed on the right side. Use glue and FH wood screws.

Two corner brackets of sheet metal, with no projections, are attached to the inside of the side panels to support the bottom brace. These brackets are placed with the bottoms flush with the lower edge of the side panels.

Joint the side panels and back supports, gluing and nailing. Check dimensions carefully and nail two temporary braces across the bottom and top of the front supports. This is pertinent, as the desk is not yet self-supporting. Laying the top will conceal the nail holes after removal of the braces.

Set the center panels into the mortises in the back braces, using glue and nails.

The bottom brace is made from ½" x 2" stock cut to 51½" length. Insert this brace in the notches on the bottom of the panels. Use two 1¼" FH No. 6 wood screws through the brace and into each of the panels. Attach the brace to the end panels with the previously installed sheet metal brackets.

Be Sure to Check Trueness

Glue and nail the front panels into place, using the same approach as on the previous panels. Check trueness and measurements at this time. When these panels are in place the desk will assume sturdiness, and adjustments then will be hard to make.

If fabrication is satisfactory to this point, set it aside and allow the glue to dry; proceed with the drawers and storage compartment.

Drawers and Compartments

The drawer runners are made of ½" x ¾" stock cut to 28" lengths. Six are required (Fig. 1).

Wood stock for the storage compartment is ⅜" plywood. The bottom is 9" x 28½". One or two partitions are made, depending on personal preference. They are 24" high and 27" long (Figs. 1 and 2).

Quarter-round stock is utilized as stops for the door, and four additional lengths will be used to support the floor of the storage space.

The drawer fronts are of ¾" plywood. They are 10" wide. The top drawer is 4" deep, the center 8" and the bottom 12". Kerf the backs ¼" x ⅜" on sides and bottoms (Fig. 1). The remaining parts are made of ⅜" plywood. Sides and bottoms are 27" long. The sides are 1" less, and the sides 1⅜" less than the height of the drawer fronts.

Four lengths of ¾" dowelling are used for the drawer pulls and cabinet handle. Cut three of these to 6" lengths for the drawer pulls; one is 10" for the cabinet handle. Plane slightly on one side (Fig. 3).

Insert the drawer runners in previously routed notches in the supports, and back brace. Glue and use two 1¼" FH No. 6 wood screws inserted from the

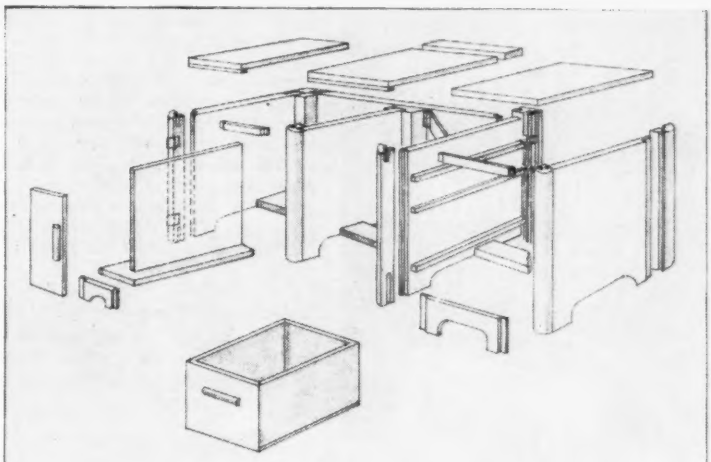


FIG. 1
EXPLODED VIEW
OF CONVERTI-DESK

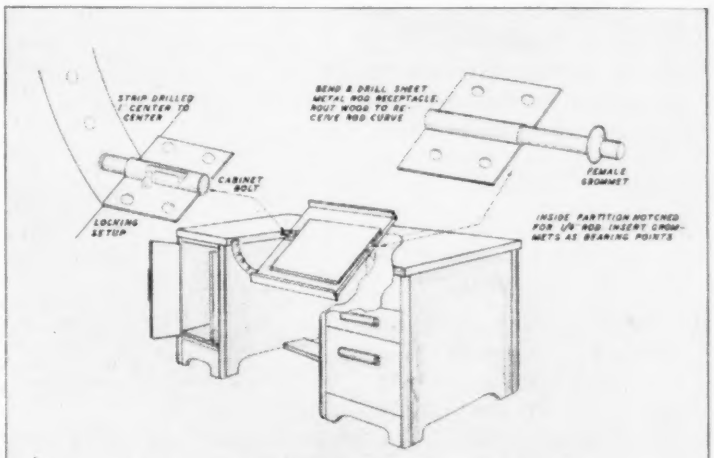


FIG. 2
CUTAWAY VIEW

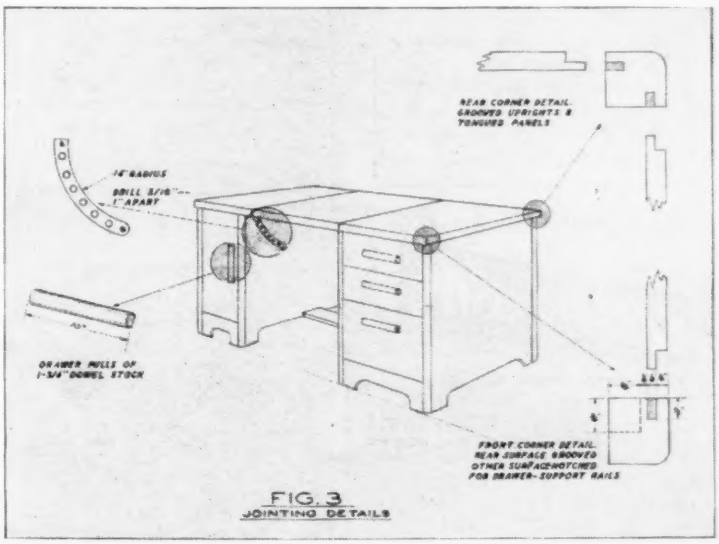


FIG. 3
JOINTING DETAILS

New Catalog FOR Woodworkers! Craftsmen!

SIXTY LARGE ILLUSTRATED PAGES showing rare woods, inlays, veneers, cabinet hardware, hand and power tools, finishes and supplies.

EVERYTHING for the beginner or advanced craftsman for every kind of project.

PLUS practical working tips and how-to-do-any-job information. Invaluable as a reference book for any type of woodworking.

ANNOUNCING HOBBYWOODS NEW ECONOMY SERVICE

Save money, buy lumber the way furniture manufacturers do! Order as little or as much as you need, we send wood surfaced on both sides. *You trim* to exact size you need. Our savings are passed on to you. Full details included in our catalog.

Order Your Catalog NOW!

Hobbywoods

1305 EASTERN AVENUE Dept. A-2
BALTIMORE 3, MD.

ENCLOSED 50c (to be refunded on first order of $5 or over) for new and complete HOBBYWOODS CATALOG

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

inside.

The drawer pulls are attached to the fronts. Glue and use two 1¼" FH wood screws in each, inserted from the inside. Build the remainder of the drawers. The sides and bottom are attached, using glue and small finish nails. The back then is put in place and nailed. Follow this procedure on all three drawers.

Drawer adjustments can be made if necessary. One drawer at a time should be fitted; leave only 1/32" space between them.

Cabinet partitions

The partitions of the cabinet section are installed in the position desired by nailing through the bottom, and nailing at the very top—through the panels—so that nail heads will not be visible in the finished work. If desired, the partitions may be given additional support by using quarter-round stock on the back panel.

Nail and glue the piece of quarter-round for the door stop. This is placed ¾" from the face of the desk. The dowel knob is attached to the door. Door and corner post are routed to receive hinges of the concealed type. Hang the door, and install a cabinet latch or lock.

The top is made of 1" plywood, or solid stock if preferred. A right section, a middle section, and a left section are indicated. The right section is 16" x 30", the left is 11" by 30", and the center is 26" by 28". Make these sections perfectly squared.

Pivot on Center Section

The prime feature of the desk—the pivot—is placed on the center section. The center of the pivot rod should be 14" from the face of the desk, and secured by a piece of pre-formed metal (Fig. 2). Rout a place in the drawing board for the pivot, so that it will lie flat on the center section. The bottom of the board should be 2" from the back edge of the section (Fig. 4).

Carefully drill the center panels to receive the rods. A grommet inserted in each hole to provide bearing surfaces completes the pivot.

A 1½" x ½" edging strip is used around the front, rear, and sides of the top (Fig. 4). Cut these to length and attach them in one long piece along the front and back. You may attach the top as one piece in this manner and cut the edging strips after installation. Leave 1/16" between the stationary and movable top sections to allow for a co-oefficient of expansion prevalent in all structures and devices.

Fasten the top to the body of the desk, using ten figure-eight fasteners, which may be bought in almost any hardware store. You may make them from sheet metal in your shop, if you wish.

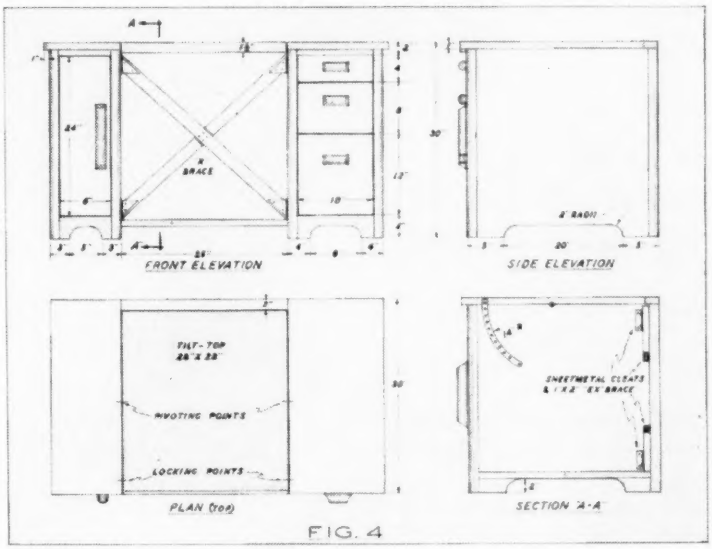


FIG. 4

After the top is installed and the edging strips cut, attach two small sliding bolts to the lower edge of the center section in its open position (Fig. 2). Fasten the locking strip to the inner panels of the desk. The center of the strip and bolts should be 12" from the pivot (Fig. 2), providing a 12" radius and describing a 24" circle.

The Finish

The final finishing is largely a matter of personal preference and skill. The desk should be finished to match your present furniture. Fill all defects, and any minute cracks apparent in the project. Sand thoroughly, and apply the stain selected. Use a sealer, and apply two coats of shellac or varnish.

If the newly finished look does not appeal to you, use pumice and a rag and rub all surfaces thoroughly. It will assume the appearance of an old and mellowed den appointment.

The unusual effect that this piece lends to the den or living room is exceeded only by the usefulness that it will in time assume for all members of the family. The addition of a desk-drafting table and artist's layout and stock board is an enhancing subject for consideration even in the teen-ager's room, or in the Rumpus Room downstairs.

For Your Bathroom

A THREE-WAY MIRROR WITH TWO EXTRA DIVIDENDS

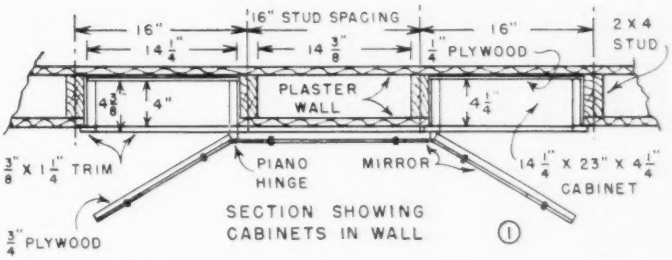
By ANNA L. MINICI

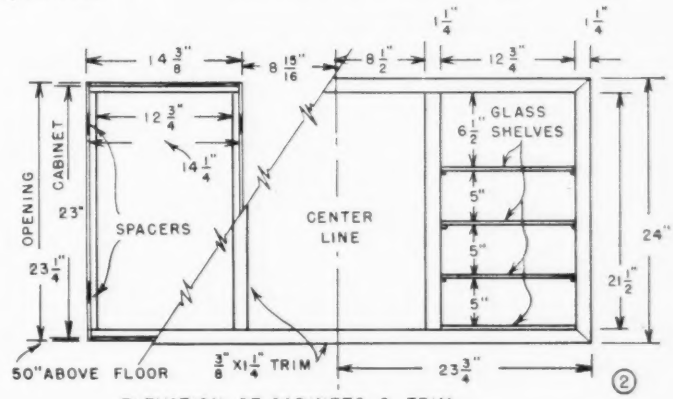
WHEN we were designing our new home my husband and I received many suggestions from friends. Most of the good ideas were too expensive to be included, due to our limited budget. However, one very practical suggestion solved our entire mirror problem in the bathroom.

A friend said, "You should have two medicine cabinets in your bathroom. They can be combined to give you a large, three-way mirror."

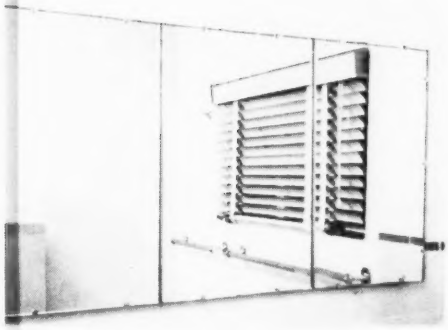
The idea sounded interesting so we designed a unit which has proved to be attractive and a joy every day. Each time I comb my hair or put on a hat, the three-way mirror is used.

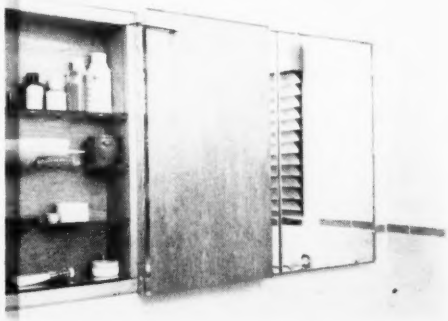
Originally we had planned to have one big mirror over the lavatory, which left no space in that spot for a medicine cabinet. Usually the solution of a problem in home design results in a compromise. However, in this instance the revised plan enabled us to have our large mirror, gave us two medicine cabinets, and the three-way mirror. Since we could do the work ourselves, the cost was little more than the single mirror we had intended to buy.





ELEVATION OF CABINETS & TRIM





The following description and drawings, based on 16" stud spacing, should enable anyone who is interested and handy with tools to make a similar unit. The dimensions of the cabinets and the mirrors can be varied to fit stud spacings other than 16". In most cases the lavatory vent pipe is concealed in the wall directly behind the center of the lavatory. This makes an ideal location for the fixed, center panel, since the area cannot be used for cabinet space.

While our house was under construction we left two openings in the bathroom wall on either side of the lavatory to accommodate medicine cabinets 14¼" wide, 23" high and 4¼" deep. The openings were made between studs as shown on Drawings Nos. 1 and 2.

In remodeling an existing bathroom, the location of the studs and the lavatory vent stack should be ascertained since the spacing between studs will determine the width of the medicine cabinets and the mirrors. The plaster should be left intact between the cabinets. The two openings for the cabinets can be cut with an old key hole saw. To start the cuts, drill a row of small holes through the plaster.

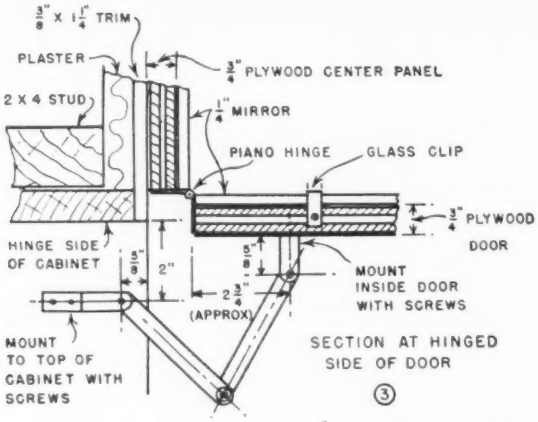
Mounting height optional

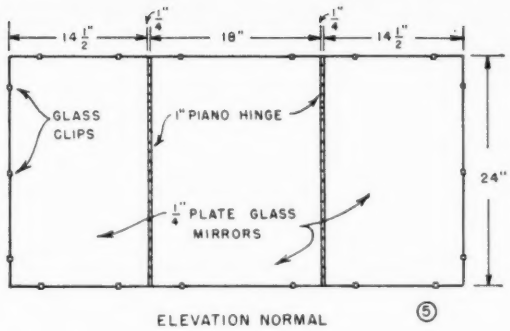
Since we are of average height, the bottom of the openings was located 50" above the floor to bring the top of the mirror to 6' 1⅜". This mounting height can be altered for persons over 6' tall, or the cabinets and mirrors may be made higher.

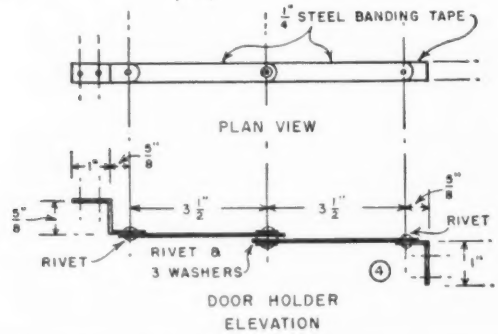
The sides, tops and bottoms of the two cabinets were made of ¾" pine and the back was ¼" fir plywood. The cabinets then were placed in the openings and nailed between the studs as shown on Drawing No. 2.

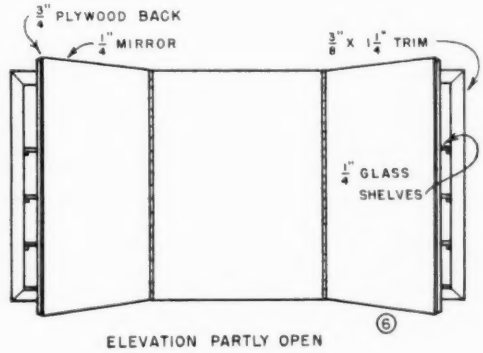
Pine trim ⅜" thick and 1¼" wide covers the joint line between the plaster and the outside of the cabinet. The trim is continuous between the cabinets at the top and bottom to form a mounting surface for the fixed, center mirror.

We ordered three plate glass mirrors with edges ground smooth. Two of the









mirrors measure 14½" x 24" and the third is 18" x 24".

Three pieces of ¾" plywood were cut exactly the same size as the mirrors. After sanding, the plywood panels and the cabinets were treated with a sealer and allowed to dry.

The 18" x 24" panel was nailed to the wall as shown on Drawing No. 1. The mirror of corresponding size was fastened to the plywood panel by means of four chromium plated clips screwed to the top and bottom edges. The supplier who sold us the mirrors furnished these L shaped glass-clips.

A full-length, chromium plated, 2" wide piano hinge was fastened on each verticle edge of the plywood panel with flat head screws. The hinge projects approximately 3/16" beyond the front face of the mirror. See Drawing No. 3.

The other two pieces of plywood were attached to the piano hinges in like manner.

The remaining two mirrors then were fastened to the hinged plywood door panels by means of 7 glass-clips per panel. Drawing No. 5 shows the mirrors as they appear at this stage.

In our case, ⅜" x ⅜" x 4¼" strips were screwed to the sides of the cabinets to support the shelves shown on Drawing No. 2. If preferred, adjustable steel shelf brackets can be used instead of the ⅜" wood strips.

The inside of the cabinets, exposed back of panels, and exposed edges were given a coat of spar varnish. We use spar varnish instead of dull in the bathroom because it is easy to clean and is not harmed by water.

Eight shelves made of ¼" plate glass, cut 4¼" wide and 12⅝" long with ground edges, were installed in the medicine cabinets as shown on Drawing No. 2.

Piano hinges preferred

The piano hinges proved to be almost frictionless. Therefore, we installed two friction type door holders. These were not available locally so we made them and mounted them as shown on Drawings Nos. 3 and 4. They were made of ½" wide blued steel tape of the type used for banding packing cases. The rivets were peened to give a snug fit which holds the doors in any position.

Now my husband has a cabinet for shaving equipment, combs, brushes and medical supplies. I have a cabinet for cosmetics, perfumes, combs and brushes.

Since we have found how very convenient this unit is, we consider it a necessity instead of a luxury. My debt to a friend will be repaid if this description helps someone else who is building or remodeling.

"SO YOU ARE GOING TO BUY A GARDEN TRACTOR?"

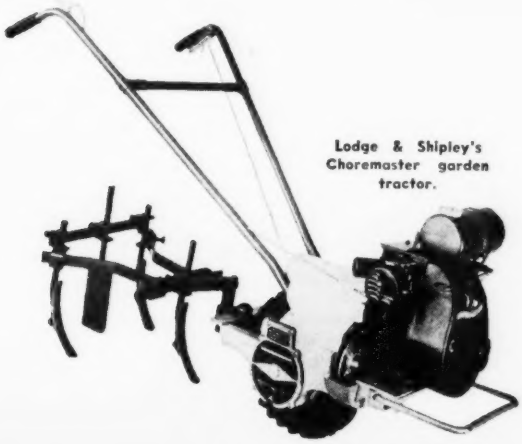
By ARCHER P. WHALLON

It is a fact that this is the beginning of the garden tractor age, the beginning of a new period of efficient homestead care and management, of an increased measure of self-support and sufficiency—even profitable opportunity. These things have been made possible by the small mobile power plant commonly called a garden tractor. Or perhaps we had better call it a domestic, household, or homemaker's tractor, for the little automotive now is far more than a soil tillage or garden implement.

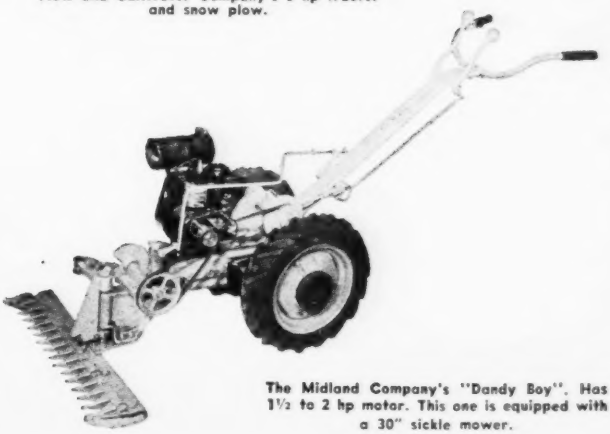
The extended versatility of service of the machine, due largely to inventions and developments of the past three years, accounts for much of the rapid increase of sales and use after a slow and retarded infancy. The garden tractor is nothing new. As long as fifty years ago men of vision before their times attempted its manufacture. At least one pioneer maker has continued in business for over thirty years. But for many years garden tractors generally were regarded as machines for the market gardener, nurseryman, and small acreage farmer; their greater social value and sales potential as a universal home owner's appliance was hardly recognized.

In 1935 only 4,202 garden tractors were made by American manufacturers. The figure of annual production increased slowly until 1945 when 26,750 were made, the largest figure to that date. Since 1951 average annual production has been over a hundred and sixty thousand, the figure for 1953 being 205,120, including 65,065 rotary tillers. In all, there are now well over a half-million garden tractors in use in the United States compared to less than fifty thousand before the war. But

The garden tractor in winter. Gravely Moto Plow and Cultivator Company's 5 hp tractor and snow plow.



Lodge & Shipley's Choremaster garden tractor.



The Midland Company's "Dandy Boy". Has 1½ to 2 hp motor. This one is equipped with a 30" sickle mower.

these figures are not very impressive in view of the garden tractor's potential market and field of utility.

Of all the millions of individual homes, both town and country, with lawns and gardens, there is not one which cannot use one or more of these small mobile power plants. Only the surface of the market for garden tractors has been scratched. A continuing trend toward suburban development, and the establishment of part-time farming enterprises, will broaden it.

The current upsurge in the use of the garden or light tractor undoubtedly is due to the ultimate realization that the machine is far more than a soil tillage implement—that it can do many jobs besides gardening. This extension of its range of utility has followed the introduction of several accessory inventions. One, the small rotary tiller attachment, obviously is a garden care implement that makes the job a single once-over-the-land operation and takes the place of several tillage and cultivation tools otherwise required.

Another, the attached tree and brush cutting saw, is of primary interest to the rural resident and woodlot owner. But two others, the electric power generator and the air compressor, are of wide application for both town and country use. Any small tractor having a belt pulley can be arranged to drive an electric generator or an air compressor. By means of an attached electric generator, the garden tractor can, in emergencies, furnish current for every appliance in the house—from lamps and stoves to the refrigerator and storage freezer.

A separate power unit

As a separate mobile power unit, it can power circular and chain saws to cut down trees, pumps for drainage and irrigation, bore post holes, do welding, and thaw frozen pipes. As a combined compressed air machine, it can operate chain saws, pump up the car's tires, spray-paint the house, and prune the fruit trees.

Another feature that is helping to sell garden tractors, particularly the smaller sizes, is that they are efficient power lawn mowers which make optional use of the conventional reel, rotary disc or bladed, and sickle bar mowers.

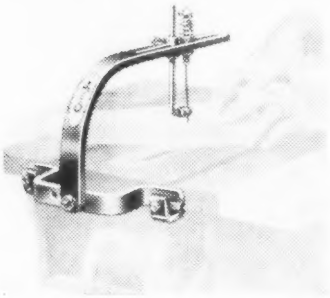
The small tractors of one to two horse power are light and easy to handle in small gardens and yards, just the things for town home owner. But these small machines do not have sufficient power to drive many accessories or to do heavy cultivating, load hauling, or worthwhile plowing. The three horse power tractor is about right for the larger number of medium sized gardens and grounds, and it is the size for which the larger number of accessories and implements is available. On the other hand, the 3 hp machine is not quite strong enough to handle some of the equipment—10" and 12" plows, heavy cultivators, grain drills, tree-cutting saws that are desirable for the market garden and the larger grounds of the suburbanite. For this heavier service, a tractor of 5 or more horse power is recommended. One caution should be noted with regard to light riding or haulage tractors; what they can pull over a hard pavement and over soft garden ground are two different things. The little one- or two-wheel tractor of 2 hp may be just the thing to bring a big box of groceries home from the store and give you a ride, but it will not be worth much for hauling rocks off freshly plowed ground.

Reverse or not reverse?

The question as to whether or not a reverse gear is desirable also is associated with consideration of the power and weight of the tractor. For small machines that weigh from 75 to 150 pounds, a reverse gear may not be worth its extra cost, as these can be pulled back by hand without great effort. Above that weight a reverse gear *is* desirable, particularly if the tractor is to be operated by children, women, or non-robust labor. For the larger tractors, those weighing 300 pounds or more, it is considered necessary.

The fact that there are approximately 200 different makes of garden tractors being sold in the United States need not be as confusing as it might at first appear. Many are much alike—assembled of standardized parts. By far, the larger number use one or more of three makes of engines that are sold and serviced the world over.

A fair-sized book could be written telling all the lore of the garden or household tractor. To do the matter justice, it would have to conclude with a long chapter telling of the great economic and social value of the little machine. One should observe that the light tractor is the machine preeminently of individual free enterprise—that it will save the small farmer from extinction; be a social security measure to the suburban part-time farmer; open the door of opportunity to the small business man, both as manufacturer and merchant; and eventually revolutionize the working and living conditions in crowded European and Asiatic lands.



Circle Jig

Just $11.95 converts your table saw to a big husky jig saw in 3 minutes

Yes, now you can have a rugged, big-capacity jig saw simply by mounting CIRCLE JIG on any 1/2" or 5/8" arbor table saw. Mounts quickly and easily. No special tools required. Compares with any high-priced jig saw—actually outperforms most. Exclusive operating features assure long, trouble-free service.

- **No machining—no drilling—no taping. Simply clamp on with ordinary wrench.**
- **Cuts to center of 16" to 24" board.**
- **Cuts 2 3/4" thick stock.**
- **Smooth working blade action.**
- **Uses standard jig saw blades.**
- **Saves floor space, cuts tool cost.**
- **Unlimited power at blades! Handles metal, plastics, too.**

If your favorite hardware dealer cannot supply you

Order Direct From
Versa Tool Mfg. Co., Inc.
400 Lake Avenue Racine, Wisconsin
$11.95 Postage Prepaid

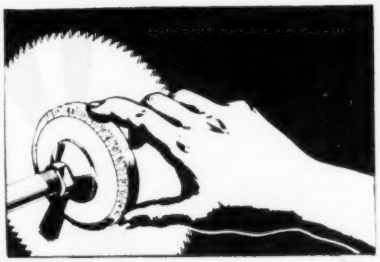
Name .....
Address .....
City ..... Zone ..... State .....

Versa·Tool manufacturing company
400 Lake Avenue RACINE, WISCONSIN

CUT PERFECT GROOVES WITH

Warren

DADO SAWING WASHERS ON YOUR SAW BLADE!



NOT ONE—NOT TWELVE BUT 40 DIFFERENT CUTS YOU JUST DIAL THE CUT WANTED

OVER 250,000 SETS IN USE

Warren Dado Sawing Washers—engineered to cut clean, accurate, parallel grooves with your present power saw. 40 micromatic adjustments—just dial the desired width. Actually strengthens blade, eliminates vibration—leave on saw for straight cuts. No burning or chewing. Over 250,000 satisfied users in 48 states and many foreign lands. Be sure to get genuine Warren Washers . . . they're guaranteed! FREE. Send for free descriptive booklet. Arbor sizes 1/2", 5/8", 3/4", and 1".

only $4.95 Per Set

See your dealer or write direct

WARREN DADO SAWING WASHERS CO.
Dept. 63, Box 98, North End Station, Detroit, Michigan

PLASTICS:

USEFUL AS WELL AS ORNAMENTAL

By HALLIE HOLMES

"No more hard work. Get yourself a hobby and learn to relax." These words, spoken about four years ago to J. A. Martin of El Cajon, California, started him on a hobby that has meant relaxation, hours of pleasure, and a chance to put into being many of the ideas from his seemingly unlimited storehouse of ideas.

"I tried several hobbies. I raised parakeets, even tried my hand at writing and editing our local *Elks Magazine*. But I never was quite satisfied until a friend suggested working with plastics," Martin recalls.

Jim Martin is more an idea man than a production man. He does make all the things he designs, but he enjoys most thinking up the idea and mulling it over in his mind until the kinks are worked out. Finally, a new gadget is produced that never has been on the market, or else an improved idea for something that has been.

Ideas for gadgets come in various ways. One of the first things Jim Martin made was a simple little folder—by gluing two pieces of clear plastic to thin strips of plastic and then putting one on top of the other. This was a holder for some papers a friend carried around on the seat of his car. The friend complained about how the papers got soiled and misplaced. The holder was made of clear plastic so that the papers, when folded in the middle, could be slipped inside the folder and it was not necessary to take them out to read them. By simply turning the holder over it reads from front or back.

From that idea came many others for holding cards, papers and even maps. Anyone traveling and trying to read maps can appreciate the folder he designed for holding maps.

From his wife came the idea for a recipe folder, as well as one for a small size ear-ring holder that would fit inside a drawer where it would be out of the dust and air. One idea sparks another.

In his home workshop, J. A. Martin of El Cajon, California, has turned ordinary sheets of plastic into hundreds of useful gadgets. Recipe card holders, cigarette boxes, electric razor holders, picture frames, tie racks, newspaper and book holders, jewelry boxes, map and paper cases, and many other attractive as well as useful gadgets.

Necessary Materials

Actually, all you need to work with plastics are a few pieces of machinery, patience, and a little place to work.

You will need some sort of a table saw. Since plastic sometimes will chip, be sure to get a saw blade recommended for cutting plastic. Your handcraft shop will be glad to help you in choosing the right one. Also you will need a buffer, sander, drill press, and sheets of plastic. Of course, to assemble the pieces you will need cement designed for gluing Plexiglas and Lucite.

Keep your machinery in clean condition, and be sure your drills are sharp. You may buy drills at almost any hardware store or handcraft shop. Practically all the drills you will need may be bought in sets. Sizes 1/16", 1/8" and 1/4" usually come as a set.

If you cannot think of an original idea to begin with, here are three suggestions with instructions and required materials:

Wall hugging tie rack. This requires only two cuts of plastic. Since plastic comes in several colors you may use the one you prefer. Plastic rods come in many sizes, and all you need do is cut it to the desired length. The rack will hang against the wall, but may be lifted for removing the ties. The bar at top gives leverage.

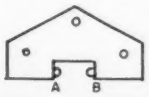
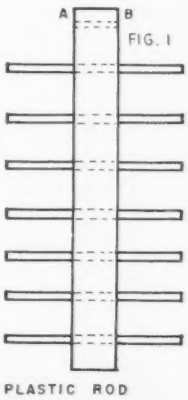


FIG.2

Draw your outline on the paper. Fig. 1—Tie Holder.



Cut desired length with table saw. With drill press, carefully bore holes through plastic to fit size of rod. Wipe with damp cloth to remove saw dust. Peel. Buff and polish edges.

Insert plastic rods. Leave enough on either side to hang a tie. At each side of hole put drop of cement. Allow to dry.

Fig. 2. Cut as directed for Fig. 1.

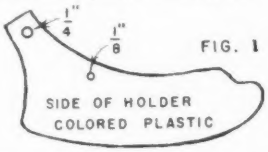
Ties are easily removed from rack by lifting end with fingers.

Use same color plastic. Bore three holes as shown in sketch. These holes are used to attach holder to wall.

Bore holes A and B same size of plastic rod used in Fig. 1. Insert rod through Fig. 1 holes A and B, then insert into holes in Fig. 2. Put drop of cement and allow to dry.

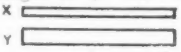
Sleigh Shaped Cigarette Box

Directions shown are for regular size cigarettes. Box may be made larger for king-size. This gadget also may be used as a holder for pins, earrings, etc.



Draw outline on paper covering plastic. Cut outline with band saw. Smooth and polish edges. Bore 1/4" hole near top of side. Bore 1/8" hole in side as shown in Fig. 1. Cut two of these pieces; they are sides of holder.

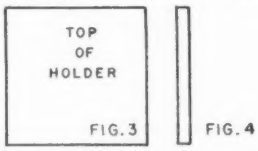
Cut a piece of 1/4" rod and another the same length of 1/8" rod. The 1/4" should



be the same color as the sides of the holder, but the 1/8" should be clear plastic.

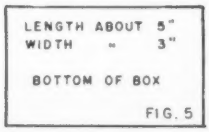
Draw outline for top. Cut with table saw. Buff and polish edges.

Cut a strip of clear plastic. A thin flat

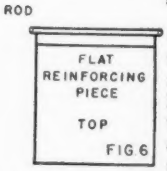


strip, same length as top of holder.

Bottom of cigarette box. Use colored plastic.



Bottom is cut from 1/8" plastic. Width should be about the length of regular cigarette, the length about 5". Bevel and polish edges. Put this piece in oven at about 120° and allow to stay until soft enough to bend. Lay in mold and allow to cool and shape. (Directions for mold are given elsewhere.)



Begin by cementing 1/8" rod to back edge of top. Reinforce by cementing beveled side of Fig. 4 to top of box lid, tightly against rod. Insert ends of rod through sides, then place bottom in place. Hold tightly and cement together. (Apply cement from inside.)

After plastic is hot and placed in mold to shape, you should have some sort of wood shaped the same as the mold to hold the plastic in shape.

Recipe and Spoon Holder

Draw outline on paper covering of plastic. Cut with band saw. Cut 1/8" dado across outside of back as shown in

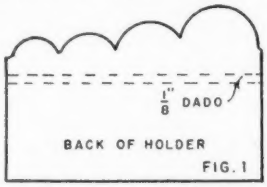
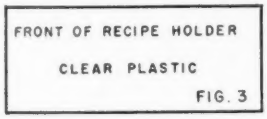


Fig. 1. (This groove is where strip for spoon holder is attached.) Front of back is smooth.

Take a strip of 1/8" plastic as long as back of holder. Bore 1/2" holes with drill press. Space holes as shown in Fig. 2. Saw off one side to leave semi-circles.

Be sure to use clear plastic so that recipes may be read without removing from holder.



Drawings show actual size recommended for average size cards. Cut as directed for any straight cut.

Cut from same color as back of holder.

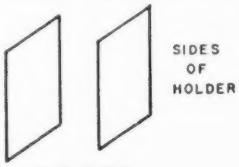
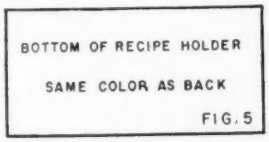
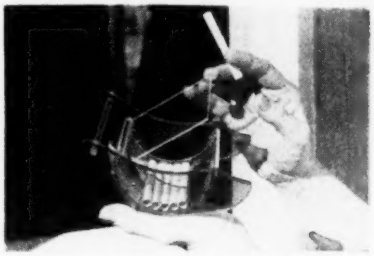


FIG. 4 & 5
SAME COLOR AS BACK

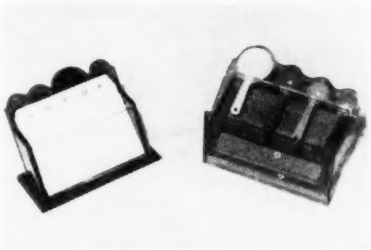
Be sure all edges are beveled and smooth. Wipe with damp cloth to remove saw dust.



All edges should be beveled and polished. Cement sides to back. Allow to dry. Carefully cement front to this section. Allow to dry. Then cement bottom. Allow to dry. Finally attach strip with the semi-circles to groove in back. Semi-circles will be toward back piece, thus forming holes where small plastic measuring spoons are hung. Holder will sit upright.



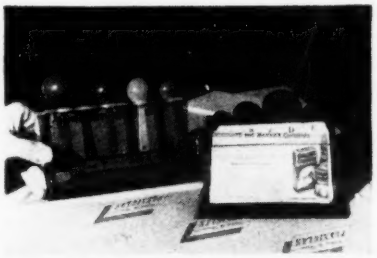
Sleigh-shaped cigarette case may be made to fit either regular size or king-size cigarettes.



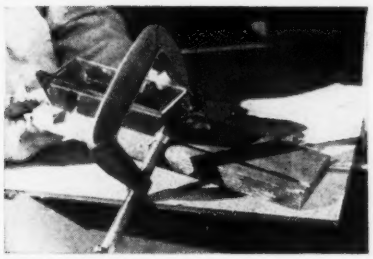
Recipe and spoon holders. Sits upright; clear front makes it easy to read without removing card from holder. Spoons are slipped easily from holder.

Metal mold used to shape bottom of cigarette case. The wood press was made from several small pieces of wood.

Jim Martin carefully holds end piece of tie rack after cementing pieces together.



Recipe and spoon holder. Front of holder is clear plastic so it is not necessary to remove recipe to read it.



One of the "jigs" conceived by Martin is this heavy piece of wood which has been grooved to fit pieces of plastic. They may be held in place while cement is drying.

Helpful Hints

As you work with plastics you will get many ideas to make the work easier. If you are like Jim Martin you may enjoy making a piece of equipment to simplify your production.

"I'm a bug for jigs. Jigs are gadgets that make the job simpler. Like a dressmaker using a pattern, a plastic worker uses jigs," Martin explains.

For example, in making a mold for the cigarette bottom explained previously, he spent a week cutting an old radio speaker. Finally emerged a curved mold just the size he wanted. Almost any metal would have served the purpose. A 4" pipe could have been cut easily into a satisfactory mold but if you have the time and inclination you might try making your own mold.

"I also had trouble holding one piece while fitting another to it, so I rigged up a piece of wood with grooves in it that I could slip the plastic into. Then, using a clamp, I could hold it in place and still have the use of both hands. I also use some wide-mouth clamps, picked up in a surplus store, to hold pieces together while the cement dries," Martin relates.

Other Useful Gadgets

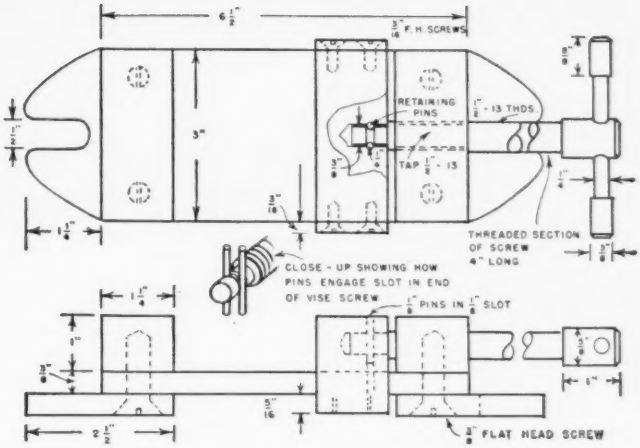
There are other types of cigarette holders. You may combine one type with picture frames in either end. There are dozens of card holders, safety razor holders, newspaper and book holders, jewelry boxes, and an endless number of things.

"Why wait until you are *told* to take it easy and find a hobby? Why not start right now to develop a hobby and enjoy it so much that it never will become a necessity for health's sake?"

"Finally, you might be interested to know that in these several years of working with precision equipment I have never ever so much as scratched myself. Considering that I can see with only one eye, maybe this will be an encouragement to others to try this hobby which has meant so many hours of pleasure to me," Martin concludes.

Q. I have many broken hack saw blades that could be reused if I could drill another hole in them. How can this be done?

A. The following two ways can be used to drill a hole in tempered steel saw blades. Use a Carbide drill or place a ring of clay around the spot you wish to drill. Wet well and heat to fiery red with a blow torch. The hole can then be drilled with an ordinary drill.



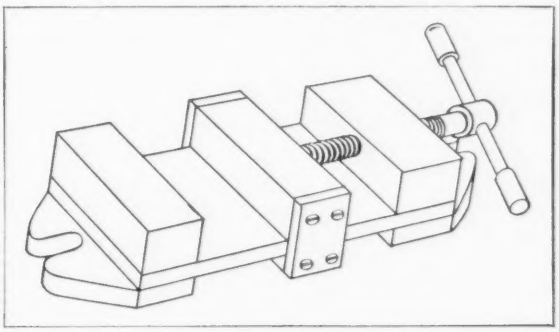
DRILL PRESS VISE

By C. W. WOODSON

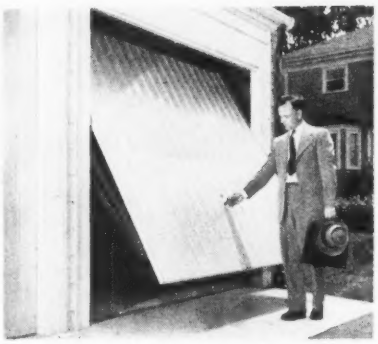
Simplicity of design makes this drill press vise an easy project to build and a useful one in the metal working shop. Its slotted feet allow clamping to the work table of the drill press or the milling machine or the shaper as well. It is constructed entirely from cold rolled steel flats, rounds and heavy bar stock. The base is cut from 3/8" flat stock and accurately squared on the ends. The feet are cut from the same thickness stock brought to the shape shown in the detail and slotted for the hold-down bolts.

When the two stationary vise jaws are made up they can be clamped to the base and feet and all three parts drilled, tapping size, for the flathead screws which hold them in place. The holes in the two jaws then can be tapped for the screws while those in the base and feet are opened out to clear them. The holes in the feet will be countersunk so the flat screwheads will fit flush with the bottom surface.

In mounting the vise jaws for drilling extreme care should be used to get them accurately square with the base. The rear permanent vise jaw and the movable one are clamped together and a guide hole drilled for the vise screw in each part at the same setting to assure perfect alignment of the holes and smooth operation of the vise screw and the jaw. Open out the guide hole in the permanent jaw and tap 1/2"-13 as indicated in the drawing. Drill the two holes for the vise screw retaining pins in the movable jaw letting the holes run all the way through so that, if necessary, the pins can be driven out. Open out the guide hole for the shouldered end of the vise screw to 3/8" in diameter and 3/4" deep. Make up the lower slide bar and end pieces for the movable jaw and drill and tap the necessary holes for the screws which hold the assembly in place.



Turn the vise screw from 5/8" round bar stock reducing the threaded portion to 1/2" in diameter. Cut the threads in the lathe for accuracy and turn the shoulder on the threaded end and cut the groove for the retaining pins as indicated in the close-up detail. Cross-drill the big end for the handle and face and bevel the end. Slip the handle through the hole in the vise screw and drive the end caps firmly in place. When the vise jaws have been mounted on the base turn the vise screw through the rear jaw and into the movable jaw and drive the two retaining pins in place. Assemble the end plates on the movable jaw and screw-fasten the lower slide bar in place. Touch up with a fine file any obstruction which prevents the vise jaw from free and easy movement and oil the various working parts.



HOW TO GET A **NEW GARAGE DOOR** AT LESS THAN **HALF PRICE!**

Yes, you can have a swing-up garage door like the one shown here — complete with Stanley Swing-Up Hardware for *less than half* what you'd normally pay!

How? *Build it yourself* from Easi-Bild's* Pattern No. 86. It's easy! No special tools — no special skill! Just follow the clear, "can't-go-wrong" directions of the pattern. Tells you everything—including what materials to buy, where and when to use them. Stanley Garage Door Set is simplicity itself to install. You'll be amazed how quickly you can do the job — and mighty proud of your results.

Ask your dealer for Simplified Directions for Installing Stanley Garage Hardware and Easi-Bild Pattern. Or use coupon below. *Trade Mark Reg. U.S. Pat. Off. — Easi-Bild Pattern Co.

EASI-BILD PATTERN CO.
Dept. S3, Pleasantville, N.Y.
Enclosed is 50¢ in coin, money order, check for Garage Door Pattern No. 86.

Please send Simplified Directions for installing ( ) Single ( ) Double Garage Door Hardware.

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

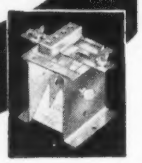
FULL SIZE PATTERNS
JUST TRACE ON YOUR MATERIAL

All patterns illustrated here—Plus garden cutouts, bird houses, corner shelves, child's clothes tree, five beautiful plastic projects — Plus 80 page Hobby & Handicraft Reference Book. All for $1.00

WALL SHELF · SEWING CABINET · HOBBY HORSE · CHILD'S WHEELBARROW · PLASTIC JEWELRY BOX

SEND $1.00 to
CRAFTERS OF PINE DUNES
501 Elm Street, Oostburg, Wis.

MAKE PERFECT JOINTS
with
GUNVER
MITER DOWELLING JIG



A precision tool for locating and drilling blind dowel holes in mitered joints. Hardened steel drill guide and automatic centering gauge insure absolute accuracy.

A) Locate and drill one to four dowel holes.
B) Use with drill press or any hand drill.
C) Makes molding miters match.
D) Easy to adjust drill gauge.

An ideal gift for the craftsman who "has everything."

RETAIL PRICE — $2.49
If Your Hardware Dealer Doesn't Have It . . . Write Us!

THE GUNVER MFG. CO., Manchester, Conn.

USE YOUR BENCH SAW
FOR JOINTING & CUTTING MOULDINGS

With our six inch tool steel cutters you can make beautiful mouldings for picture frames, furniture and house construction. Cutters as shown.

DIRECT FROM FACTORY
One inch wide $1.98—1½ inch wide $2.49 ea. State hole size. Postpaid. Last & Fodder free—Guaranteed.

JOHN A SANDSTROM
Rt. 2-B Clearwater, Fla.

NO PARTS TO FLY OFF!

FROM WROUGHT-IRON FENCE TO PATIO TABLE

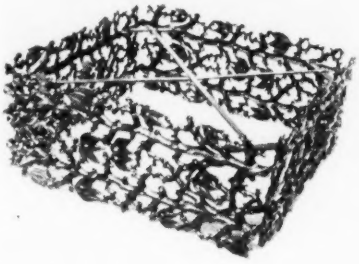
By WALTER L. HARTER

REMEMBER those ornate wrought-iron fences that were so popular a generation ago? They were beautiful and very widely used in their time. But now most of those that are left will be found in the yards of used-metal dealers.

However, under their coating of rust, these fences, either wholly or in part, can be used to make many things for modern living. One of the uses, as pictured here, is as a substantial table for the patio or yard.

This fence had been made up of panels 20" wide and 60" long. Four of these panels, cleaned of rust and painted, serve as the base of the table. The ends of the panels were welded together where they met. To strengthen it further, holes were bored and strips of iron welded across the corners. Then longer strips were laid from corner to corner and welded. These appear in photo at right.

The top of the table was made from nine boards (2" x 8") joined together underneath. The top, being quite heavy, was not attached permanently to the iron-work base, but laid across it. Having the top detachable from the base makes it easy to move the table to different locations in the yard.



Q. When using a belt sander on painted surfaces the sanding belt becomes filled with paint particles very quickly. Is there any way to prevent this, or is there a special belt made for sanding on painted surfaces?

A. From the information in your letter it seems to be a case of the wrong abrasive being used. Coated abrasive manufacturers today coat two types of mineral coatings. (1) Open coat used whenever filling is a problem such as sanding soft woods, old paint, plastics, etc.; and (2) closed coat used on operations where filling is not a problem such as sanding hardwood and ferrous metal. Open coat material has the mineral spaced apart to allow the sheet to clean itself. Closed coat has a full mineral coating and has more mineral points in contact with the sanding surface.

HEAVY DUTY BORING BAR

By C. W. WOODSON

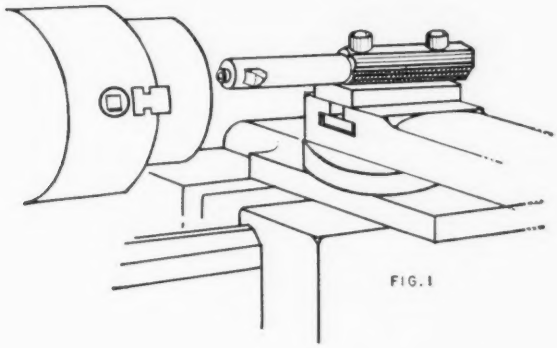
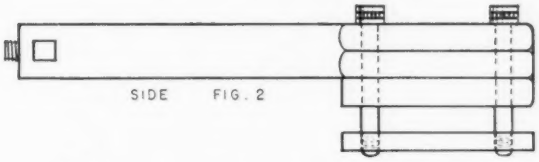


FIG. 1



SIDE FIG. 2

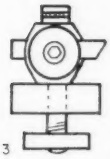


FIG. 3 END

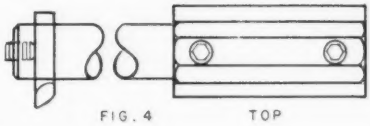
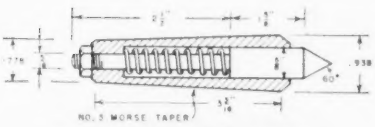


FIG. 4 TOP

Boring deep holes in large work can be accomplished readily with the simple boring tool shown in Fig. 1. It can be constructed from heavy steel hexagon rod, turned to a round section for part of its length, with two screw holes drilled through the flats on the hexagon end for fastening to the compound rest of the lathe. A hole for the tool bit is cross drilled and filed square in the opposite end and the tip is drilled and tapped to receive a headless set screw, as shown in Figs. 2, 3 and 4, for clamping the cutting tool in place.

The hexagon end of the bar is mounted on a cold rolled steel base just thick enough to bring the cutting edge of the tool bit to exact lathe center height. This base should be wide enough to give support to the boring bar and cut to the same length as the tool post slot in the lathe. A steel shoe to fit inside the tool post slot also is cut to the same length and drilled and tapped for the two hollow head cap screws which hold it securely in place.

The height of the boring bar and cutting edge of the tool bit is fixed but adjustment in the horizontal plane can be made by swinging the compound rest to the angle desired. The tool bit is brought into cutting position by the cross feed screw and the longitudinal feed controlled by the lathe carriage under hand or power feed.



SPRING CENTER

By C. W. WOODSON

Circular work with a shaft hole in the center, such as gear blanks or pulley wheels can be fastened quickly and accurately to the faceplate in an on-center position by using the spring center shown here. As the workpiece is clamped against the faceplate the tapered point of the spring center guides it into a concentric position and the work will need no further adjustment as the faceplate clamps are tightened.

The spring center is made up from a No. 3 Morse taper shank, which can be taken from a discarded twist drill or other taper shank tool. The tapered shank is slipped into the spindle throat of the lathe where the fluted end of the drill is cut off and the big end is faced smooth and square and a 5/16" hole drilled through its entire length. The large hole for the plunger then is bored and reamed to final size. The plunger is made up from drillrod turned to the shape shown in the detail and threaded for a 5/16" nut on one end and brought to a 60° point on the other. A fairly stiff spring is used to provide a constant pressure on the back of the plunger point. Grind the ends of the spring flat for a perfect bearing, and assemble the parts.

Whatever your **CRAFT OR HOBBY**

You'll see better and work better with the

MAGNI-FOCUSER

The New 3-D Binocular Magnifier

With many hobbyists the most valuable tool is the Magni-Focuser.

It is worn like an eye-shade and acts like one, too, cutting out all overhead and side glare and at the same time giving needle sharp magnification in third dimension (3-D). Leaves both hands free to work. Wear it over regular eye glasses. You resume your normal vision by slightly raising head. Weighs only 3 ounces. Send check or money order $10.50 for 10-day trial. Your money will be refunded if you're not delighted with the results.

CERAMICS
JEWELRY MAKING
LAPIDARY
LEATHER-CRAFT
METALCRAFT
MODEL MAKING
MODEL RAILROADS
NEEDLE-CRAFT
PAINTING
PLASTER-CRAFT
RE-WEAVING
SCULPTURE
SHELLCRAFT
STENCIL-CRAFT
WEAVING
WOOD-WORKING

EDROY PRODUCTS CO.
DEPARTMENT B
480 Lexington Ave., New York, N. Y.

DRILL SAW **REAM CUT**

INTERNATIONAL

HI-SPEED COPE SAW DRILL BIT

DRILL, SAW, REAM . . . metal, pipe, wood, plastic, transite, etc. Use with any electric drill, slow drill press, lathe or milling machine. Drills own starting hole—upper part of bit is used to cut, saw or ream circles, ovals, squares or scrolls. Easy to operate. Ideal for carpenters, mechanics, electricians, plumbers, hobbyists, many others. Abrasive resistant, high speed steel. Flutes ground from solid. Will withstand severe continuous use without breaking. Resharpened at no charge. Takes place of up to $50 in tools. ½" diameter, 2" cutting sections, total length 3½". Available in three types—All Purpose, Wood, Heavy Metal. Specify type needed. Set of 3, $11.50. Details on request. Shipped same day. Money-back guarantee. Dealer inquiries invited. ORDER NOW! SEND CASH, CHECK OR MONEY ORDER.

Manufactured and distributed by
INTERNATIONAL TWIST DRILL CORP.
681 Wyandotte, Rm. 681, Kansas City 5, Mo.

only $3.95 POST PAID

Get This NEW Catalog of WOOD AND WOODWORKING MATERIALS

World's Largest Selection of Finest Domestic and Imported Woods...Mouldings, Hardware, Tools—ALL AT LOW MONEY SAVING PRICES!...
Your complete wood buying guide and project book. Craftsman is your best, most complete source of finest kiln-dried domestic and rare imported woods, beautiful wood inlays, colorful bandings, matched plywoods, embossed mouldings, carved ornaments, newest woodworking tools, "hard to find" cabinet hardware and fittings...more than 1,500 items! Packed with newest scroll saw patterns, project ideas and money making plans. Enclose 25c (refunded with first order) to help pay mailing and handling cost. WRITE TODAY!

148 PAGES
Many in full color
packed with rare, fancy & imported woods...veneers, plywoods, patterns, tools, ornaments, hardware ...everything for the woodworker.
MAIL COUPON NOW!

Craftsman Wood Service Co., Dept. E-53
2729 S. Mary Street - Chicago 8, Ill.

CRAFTSMAN SERVICE CO., Dept. E-53
2729 S. Mary St., Chicago 8, Ill.
Enclosed find 25c. Rush me new WOODWORKERS' CATALOG HANDBOOK.
NAME _____
ADDRESS _____
CITY _____ Zone ____ STATE _____

LAWN ORNAMENTS-NOVELTIES
EASY TO MAKE - BEAUTIFUL DESIGNS!

Attractive, carefully designed, full size patterns from which you can make beautiful projects for pleasure or profit.
28 Lawn Ornament Patterns, figures, animals, fowls, birds, etc., 25c. Other patterns: 15"-20" high: Dutch Girl, Dutch Boy, Pirate Keep Off The Grass, Bull Terrier, Mexican Girl, Mexican Boy, Dwarf, Riding Snail, Penguin, Little Flower Girl, 15c each; 25 Novelty Patterns, book ends, door stops, etc., 30c. All the above **62 patterns only $1.00.**

● FLYING DUCK

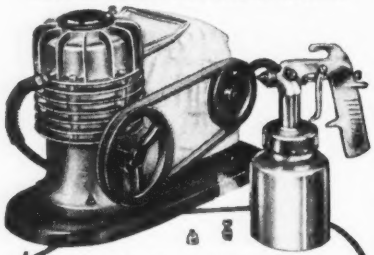
Wind revolves wings. Realistic appearance. Pattern and instructions showing how to make and paint every part and Wing Pinion Kit: brass bearing, steel shaft, wing lugs, bolts, nuts and washers, 60c. Patterns only, 25c.

NODDING BIRD ●
This amusing bird has a flexible steel spring for his neck. Air currents cause the head to nod in a very realistic manner. Colorful and decorative. Full size pattern including steel spring for neck, instructions and color directions, **35c**
"WIGGLY ALLIGATOR" Action Pull Toy, full size pattern, 25c. **4 Full size Wall Shelf Patterns,** scroll design, **25c.**
All items listed in this ad, only $2.10.

STROTHER PATTERN SERVICE
Dept. 541-1-Z Box 128 Belington, W.V.

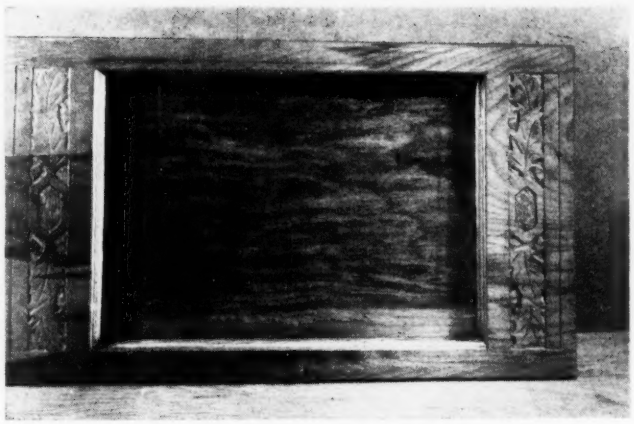
Speedy Sprayer

DOES HOURS OF PAINTING IN MINUTES



Quickly Pays For Itself!
Save effort, paint and money with Speedy Sprayer! Paints everything—toy to a house. A professional-type outfit! At hardware, lumber, paint or auto supply dealers. Outfit with gun, less ¼ h.p. motor, $36.50.

FREE! "HOW TO SPRAY"
Write for booklet and literature!
W. R. BROWN CORP.
2631 N. Normandy Ave., Chicago 35, Ill.



The finished tray.

Cutting the lines with 1/16" cutter driven by flexible shaft motor.

Carving the oak leaf design with the flexible shaft.

HAND CARVED SERVING TRAY

By DICK HUTCHINSON
Associate editor

CARVING a design, like the one used to decorate this interesting serving tray, is a reasonably simple matter. Ordinary wood carving tools may be used. However, we find the use of the flexible shaft much faster.

First, cut a piece of selected ⅜" birch plywood 11¼" by 19". Then cut a piece of the same material ¼" thick by 10-5/16" wide by 15¼" long, and a second piece of the ⅜" stock 10-5/16" by 15¼" long.

Lay down the last piece, and set the ¼" piece on top so that the two sides are parallel and perfectly even. Then tack together with ⅜" wire nails along the edges so that when the nails are withdrawn and the tray is assembled the holes will not show. Tilt your bench saw and make a 58° bevel cut across each end. Then sand both the sides and the ends for a final finish, after which the two pieces are separated and the nails withdrawn.

Next, fit the ¼" piece to the underside of the ⅜" top piece. Check to make sure it is centered evenly, then coat with liquid glue and clamp the two pieces together to dry.

When thoroughly dry, lay out for the cut-out center. Drill a hole in each corner, then tilt the jig saw and cut out the center through both pieces, as shown. This cut should be beveled 83°. Sand the beveled sides to a finish.

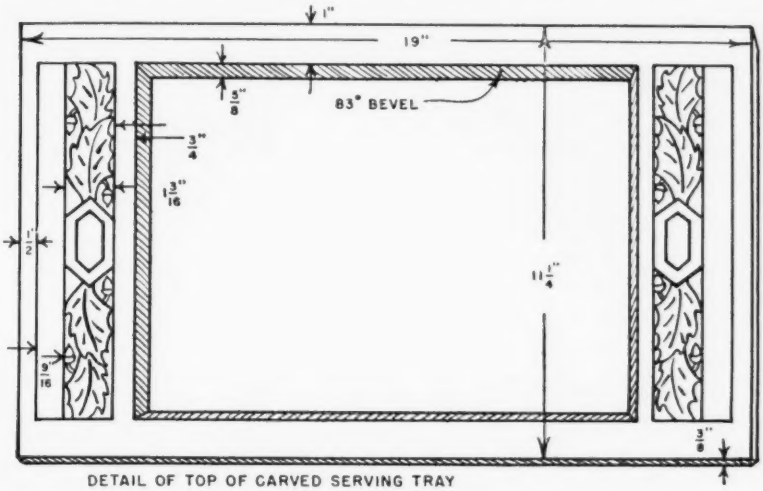
When the frame is dry glue the ⅜" bottom piece on, making sure the edges are all even. Clamp and let dry.

The oak leaf design is traced on at each end, and then is carved out to a depth of about 1/16". If hand tools are used, use a straight-edge for a guide; use a knife for cutting in the straight lines. If the work is done with the flexible shaft, the straight-edge also is used, but this time the cut is made with a Vee type cutter.

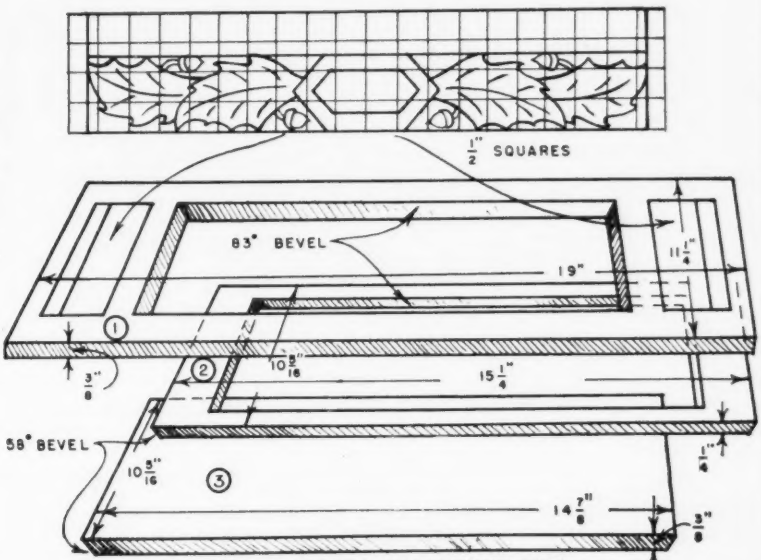
Sand the finished tray to a glossy smooth finish all over, using fine 0000 steel wool for the final if necessary.

The finished tray may be varnished. However, we like the finish produced by

the application of three successive coats of white shellac, with a careful rubbing between coats. This finish brings out all the natural beauty of the grain of the wood and, since the design is of oak leaves, the grain should be accentuated.



DETAIL OF TOP OF CARVED SERVING TRAY



DETAIL OF PARTS FOR SERVING TRAY

COMPLETE PLANS—PHOTOS, DRAWINGS, INSTRUCTIONS—FOR:

WOODEN CLOCK MOVEMENT

for a

GRANDFATHER CASE

Including "Gear Cutting Attachments for Wooden Clock Movements"

This was one of the most popular home workshop projects ever published. Copies of the issues containing these plans were sold out years ago. Now, by popular demand reprints of the complete plans again are available. Nothing has been cut; all the original details are in the 7-page reprint.

PRICE 50c POSTPAID

Hobby Books, 154 E. Erie St., Chicago 11, Ill.

MONEY in DONUTS

Make New Greaseless Donuts. Start in kitchen. No smoke. Sell stores. Cash daily. No experience necessary. FREE RECIPES. No obligation. Write today. O. RAY CO., 3608 S. 18th Ave., Minneapolis 7, Minn.

BUILD YOUR OWN POWER TOOLS—TILT/ARBOR SAW, BANDSAW, BELT SANDER

TILT/ARBOR SAW • 27x28 in. table stays level. Blade tilts full 45 degrees. • 10 in. blade cuts 3¼ in. deep • jackscrew depth adjustment. • Floor model, 34 in. table height. • New Departure ball bearing arbor, ¾ in. precision shaft, ready to run, ⅝ in. bore blades. • Quick positioning, self-aligning rip fence guide. • Sturdy wood, steel and aluminum construction. • No machining—build easily with hand tools only. • Capacity and performance of floor saws selling for $150.00 and up!

SAVE $50 OR MORE

GIL-BILT Metal Parts Kit, includes Plans, ball-bearing arbor, cast aluminum miter gauge and bar, rip fence guide, machined lock knobs, jackscrew mechanism with 4½ in. handwheel, and all other metal parts (less blade) $22.95
Same Kit with 10" combination blade 25.90
Same Kit with 8" combination blade 24.90
If not satisfied, return Kits in 10 days for refund of purchase price.
(Prices include postage up to 300 miles. Over 300 add 5%)

COMPLETE PLANS only $1.00 EACH

GIL-BILT Step-by-Step pictorial plans (No blue-print reading required), full scale patterns—actual photographs for above 10" TILT/ARBOR SAW, 8" TILT/TABLE SAW, 12" BAND SAW, 18" BAND SAW, BELT SANDER, SPINDLE SHAPER. $1.00 each postpaid anywhere in the world or WRITE FOR FREE descriptive catalog.

GILLIOM POWER TOOLS Dept. 20-C, Lambert Field, St. Louis 21, Missouri

CLAMPS

POWER-TESTED FOR BETTER PERFORMANCE

MANY PATTERNS

Sizes ¾" to 12'
½" to 16" in Depth

Tough flaw-free construction means extra strength for extra service. Used and approved by leading industries for 76 years.

HARGRAVE

Write for Catalog showing complete line of Clamps, Chisels, Punches, and Masonry Drills, available at your Hardware Store.

THE CINCINNATI TOOL CO.
1942 Waverly Ave. Cincinnati 12, Ohio

GET THESE U-CAN-DO-IT WOODWORKING PLANS ... TODAY

Making furniture, toys, household articles is simple with a set of Rogers Project Plans . . . and a bottle of Rogers Glue. Simple illustrations with easy-to-follow directions are given in these Plans as well as directions for setting up a simple workshop. With "gorilla grip" Rogers Glue, you'll discover that joints are really firm and solid . . . only the finest materials obtainable go into the making of Rogers Glue. Use it for mending broken furniture, too. Send 15c today for this Special Offer: a full bottle of Rogers Glue with a new set of 3 Project Plans. Rogers Isinglass & Glue Co., Gloucester, Mass. Ask For Rogers Glue At Your Local Hardware Store.

"A Ton of Strength in Every Drop"

ROGERS *the best* LIQUID FISH GLUE GLOUCESTER, MASS.

CARPENTERS AND BUILDERS GUIDES

INSIDE TRADE INFORMATION for Carpenters, Builders, Joiners, Building Mechanics and all Woodworkers. These Guides give you the short-cut instructions that you want—including new methods, ideas, solutions, plans, systems and money-saving suggestions. An easy progressive course for the apprentice and student. A practical daily helper and Quick Reference for the master worker. Carpenters everywhere are using these Guides as a Helping Hand to Easier Work, Better Work and Better Pay.

● INSIDE TRADE INFORMATION ON: 4 VOLS. $6..

How to use the steel square—How to file and set saws—How to build furniture—How to use a mitre box—How to use the chalk line—How to use rules and scales—How to make joints—Carpenters arithmetic—Solving mensuration problems—Estimating strength of timbers—How to set girders and sills—How to frame houses and roofs—How to estimate costs—How to build houses, barns, garages, bungalows, etc.—How to read and draw plans—Drawing up specifications—How to excavate—How to use settings 12, 13 and 17 on the steel square—How to build hoists and scaffolds—skylights—How to build stairs—How to put on interior trim—How to hang doors—How to lath—lay floors—How to paint and insulate.

$1 PER MO.

To get this assistance for yourself simply fill in and mail the FREE COUPON below.

AUDEL, Publishers, 49 West 23rd ST., New York 10, N.Y.
Mail Audels Carpenters and Builders Guides, 4 vols., on 7 days free trial. If O.K. I will remit $1 in 7 days and $1 monthly until $6 is paid. Otherwise I will return them. No obligation unless I am satisfied.

Name _____
Address _____
Occupation _____
Employed by _____ CPT

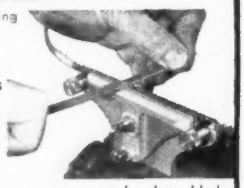
SHARPEN CUTTING TOOLS—FASTER, EASIER

Keep your cutting tools and bandsaw blades razor sharp with these two unique sharpening jigs.

GRIND-IT
Tool Grinding Jig
Complete instructions.
(Wheel not included)
Only $5.95
Postage Paid

Grind-It — Amazing jig holds cutting tools for accurate precision grinding . . . everything from chisels and plane blades to high speed drills. Will hollow grind or straight grind at the correct angle for each tool. Eliminates guesswork. Attaches to any bench saw capable of mounting a tool grinding wheel.

BANDSHARP
Bandsaw sharpening jig. Complete instructions and one file.
Only $3.95
Postage Paid.



BandSharp — saves you money on bandsaw blade replacements. Sharpen blades in your own shop. Do it for others! Vise-like adjustable jaws hold skip tooth or standard toothed blades from 3/16" to 1 1/4" wide. Sharpen up to three teeth at a time . . . easily and quickly. Average blade hand sharpened in 15 minutes.

Both jigs made of tough aluminum castings and quality steel parts.
10 Day Money-Back Guarantee. Order today.
Send check, cash, or money order. We pay postage.
Dealer inquiries welcomed.

RIVERSIDE ENTERPRISES
20 Riverside, Corning, New York

Only $29.75 complete

$$ FUN OR PROFIT $$

Flocks & Sandblasts

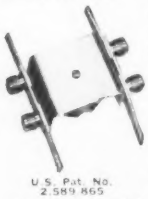
Dual Purpose Spray Gun!
Uses only 25 lbs. Air Pressure!

• Thousands of profitable uses in Home, Shop, Industry. Refinishes any Wood, Glass, Metal, Plastic object. Makes Auto Interiors Clean & New. Lines drawers, Marproofs lamp bases, Refinishes any object. All in colorful Flock, Etch & Frost windows, glassware, etc. Removes Paint & Rust from Autos, Tools. Guaranteed! Send $29.75 or write for Free Information and Free Sample Complete Flocking Supplies, Adhesive, Ballentinea Beads.

BLASTO SPRAY GUN MFG.
Dept. HC-30, 7007 Haas Ave. Los Angeles 47, Calif.

JOINTER AND PLANER BLADE—SETTING

MAGNA-SET



U.S. Pat. No. 2,589,865

Here is a simple yet very effective method of setting Jointer and Planer blades. This method is destined to make obsolete the tedious and mechanically inaccurate methods commonly in use today.

NOTE THESE ADVANTAGES

An expert mechanic is not required for setting blades. With Magna-Set, anyone can do it!

The necessity of tapping, prying and readjusting is entirely eliminated!

Use of Magna-Set constitutes a saving on material spoilage and excessive and improper blade wear!

Send Post Card for information to:

MAGNA-SET COMPANY, Dept. HH-4
632 NEW HAVEN AVE. WOODMONT, CONN.

6 Dozen $1.00
assorted pegs, balls, turnings etc., with Bulletins of hard-to-get specialties for woodworkers arts and crafts teachers, handicrafters

CRAFTS CENTER
SALISBURY 4, VERMONT

SMOKING STAND DE LUXE

THIS classic columnar smoking stand is made from solid black walnut. However, if oak is preferred, all of the details will be the same. Only the finishing will be different.

Cut the four boards for the column from 1/2" material, as shown in the drawing. Note that the boards are 7/8" wider at the lower end, so that the assembled column will be slightly tapered, for a more graceful appearance.

Cut a strip of 1/2" lumber 3/8" wide at one end, by 1 1/4" wide at the other, and 27 3/4" long. Tilt the saw to 45°, then set up with one of the column boards, with the narrow tapered strip, as shown in the drawing; miter one side. Change ends with the boards, and turn the board around and miter the other side.

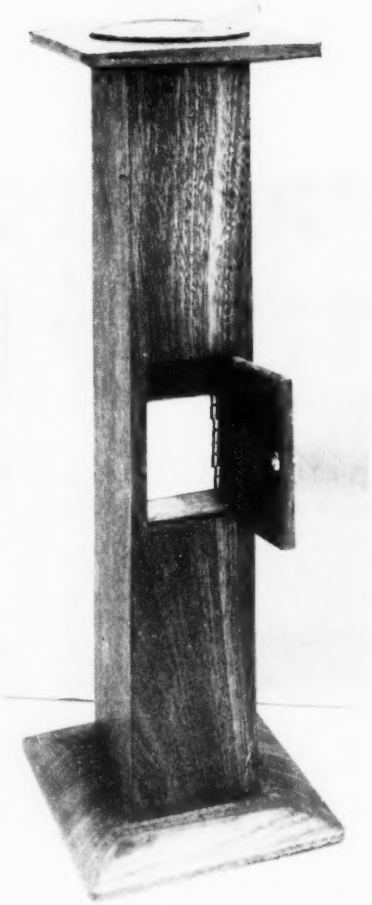
Cut the miters on all four boards, then tilt the jointer to 45°, and set the cutters to cut just enough to smooth up the mitered edges; run the pieces through. Cut out for the door, on the jig saw.

Cut the two plywood end blocks and the piece for the shelf, and check for a perfect fit. Glue and brad two 1/2" blocks 2" long to two of the uprights 1/4" below the door opening—to support the shelf. (See drawing.) Next coat the mitered corners and the edges of the shelf with good glue, and set up the four-sided tapered column. Set in the plywood end blocks—temporarily—to hold the assembly square. Clamp tight from all sides with parallel hand clamps. Check all corners to see that each is tight and even.

While the glue is drying, the other parts can be made. Cut the top and bottom pieces from 7/8" material. Now tilt the saw for the bevel and run the pieces through edgewise.

To make the ash tray, scribe a 5 1/4" circle on a piece of 3/4" birch plywood. Tilt the jig saw for a 65° bevel, and cut out the piece. Scribe a 4 5/8" circle on a second piece of 1/2" plywood; saw out in the same manner.

Now cut a disc of 18-gage soft sheet copper 5 3/4" in diameter. Buff to a high polish, then hammer on one side. Clamp the piece between the two plywood blocks as we have shown in the drawing, and clamp the whole in the vise. Then, using the hammer, hammer down gently all around. The edges will kink slightly. Remove and straighten out by hammering from the inside. Replace in the wood clamps and hammer down evenly all around. After that file, or grind down the rim even.

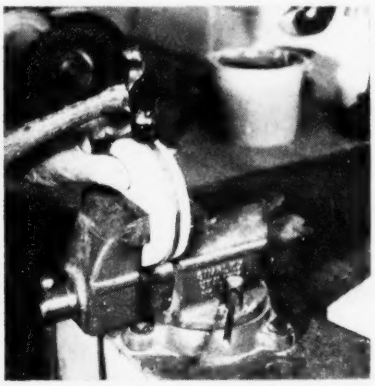


The completed black walnut stand. Open door shows cigarettes inside.

Set up the walnut stand top in the lathe and, using the tray as a guide, turn the recess for nesting the tray. The tray should stand about 1/8" above the top.

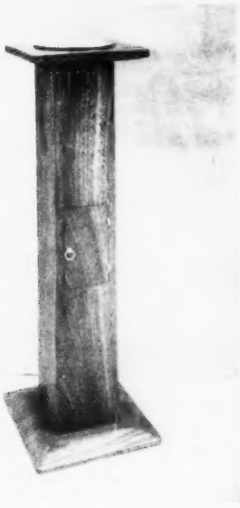
Sandpaper both the top and bottom

Showing how the miter is cut on the sides of the four boards for the column.

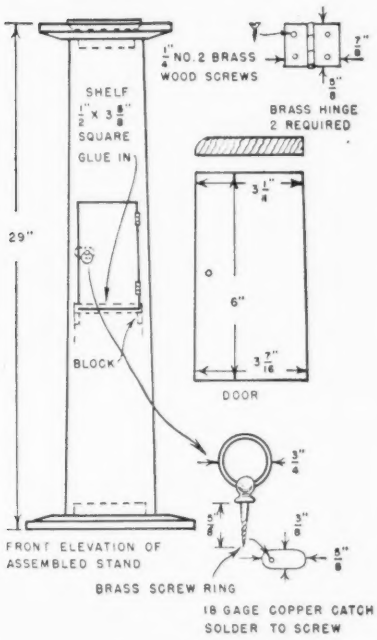


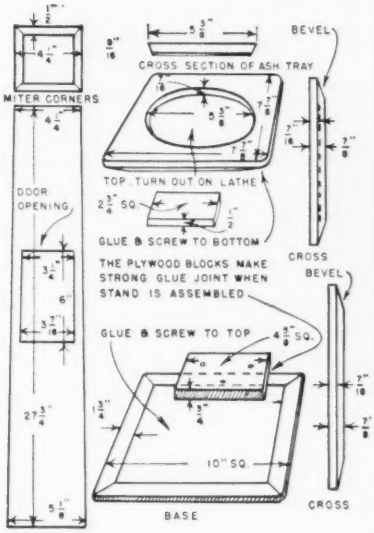
Forming the copper ash tray between the two blocks, which are clamped in the vise.

The boxed column is assembled and all parts are ready for final assembly.



Stand with door closed. The brass hardware dressed it up attractively.



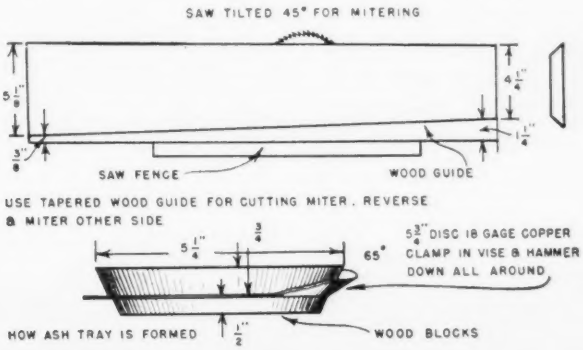


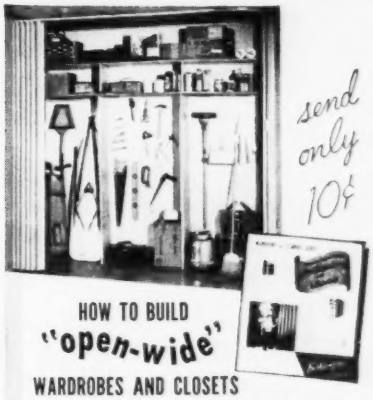
pieces evenly, and round the corners slightly. Remove the clamps and sandpaper the column in the same manner. If a vibrator sander is available the finish sanding may be done with this, using very fine sandpaper.

Remove the plywood blocks from the top and bottom of the column. Coat with glue, and set in the center of the top and bottom pieces as indicated in the drawing; secure with wood screws.

Now coat the edges of the blocks and the top and bottom of the column with glue, and coat each end down about 1" all around on the inside. Then fit the top and bottom on and clamp to dry.

(*Continued on page* 240)





send only 10¢

HOW TO BUILD
"open-wide"
WARDROBES AND CLOSETS

Why be "closet-crowded" when you can build big, low-cost clothing and storage units? It's so quick and easy with Ra-Tox Fashionfold Doors ... beautiful woven Basswood doors that fold compactly to one side for full access. Send 10c in coin for illustrated folder.

THE HOUGH SHADE CORPORATION
1124 JACKSON • JANESVILLE, WISCONSIN
IN CANADA: Canadian Ventilating Shades Ltd. 481 Reid Street • Peterborough, Ontario
sold by retail lumber and building material dealers everywhere

Fashionfold® Doors
a product of the world's largest manufacturer of wood slat products

90 PATTERNS $1
LAWN ORNAMENTS·NOVELTIES

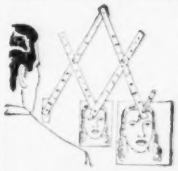
FULL SIZE patterns up to 20" high of Dutch Boy & Girl, Dwarf, Penguin, Fishing Boy, Animals, Birds, Novelties and many other popular items. Easy to make and sell. Just trace, cut out and paint. Send $1.00 today for the LAWN ORNAMENT PACKET containing all 90 patterns.
MASTERCRAFT PLANS, DEPT. 32-H
7041 Olcott Ave., CHICAGO 31, ILLINOIS

Home "Fix-it" Tips

Plastic Wood permanently repairs furniture, replaces rotted wood, and fills knot holes and gouges. Apply it like putty—it hardens into real wood.

YOU NEED "PLASTIC WOOD"®

COPY ANY PICTURE
with the AMAZING PANTOGRAPH



The ideal method of reproducing maps, pictures, diagrams, etc. Just place original design under the tracer point and simply trace it. Makes faithful accurate copies from 25% to 425% larger than original. Comes ready for use with extra pencil.
Sent Postpaid, anywhere in U.S. for only $1.00. Order today. No C.O.D.'s accepted.
DAVID W. WOLF
74 Hunnewell Avenue, Elmont, L.I., N.Y.

Signpost of Distinction for Your Home or Business

By WARNER G. TILSHER

WHY not give a personal touch to your home with a handmade "signpost of distinction"? I doubt if you can find one for sale like that pictured; but, for less than four dollars, you can make it yourself in a couple of leisure hours. And you don't have to be an expert woodworker to turn out a professional looking job; in fact the signpost looks at its best when it is a bit on the rough side.

Best woods to use are redwood, cedar or cypress. Post can be from 2x4 on up to 4x4, about 8' long; cross arm about 2x4x33"; diagonal braces about 1x3, some 26" long. These lengths allow for trimming after the job is assembled. You also will need about 3' of ¾x¾" for dowels and wedges.

Your local lumber yard or fenceman usually can get hand split posts and rails although it is not much of a trick (but very self-satisfying) to split your own from big posts or logs with axe and wedge.

Tools needed are hammer, ¾ to 1½" wood chisel, hand saw, brace and ¾" bit, small hand plane, coping saw, clamp and small carving gouge.

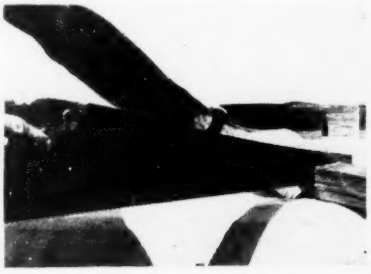
Construction

Lay the cross arm at right angles across the post about 16" from the top, leaving about 4" sticking past the back edge of the post. Mark for the lap joint. Saw post about one half through and chisel out the core. Set the cross arm into the slot and mark it from the post. Slot out cross arm. Since you are dealing with rough lumber this may call for a bit of "cut and try" until you get the post and arm fitted up fairly evenly.

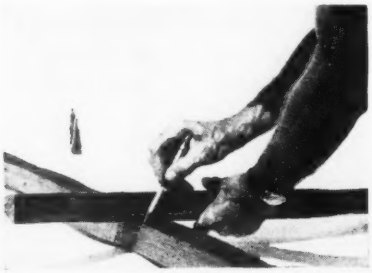
Set up the two diagonals as shown and clamp them tight across the post and arm, making sure the arm is square with the post. Bore holes for the dowels; when the point of the drill comes through drill back from the other side to avoid breaking out the wood.

Dowels are from ¾" square stock. Plane them round, trying them in the holes until they go in easily but not too sloppy. Make each dowel about an inch longer than depth of hole. Saw a slot about 1½" long into each end; slots should be parallel with each other.

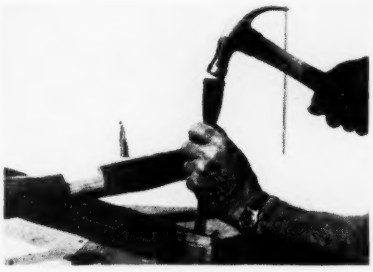
Wedges are hand sawn from ¾" stock;



Sawing out for half lap joint.



Laying out lap joint—cross arm to post.



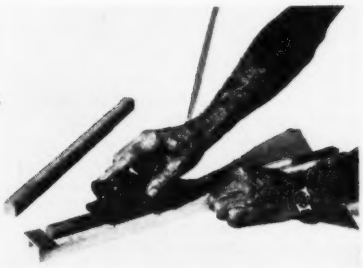
Chiseling out half lap joint.

make them about 2" long, tapering from about 5/16" to nothing.

Dowels should be placed so that the wedges will cross (as nearly as possible) the grain of the pieces to be joined—NOT parallel or the wedge will almost surely split them. Drive them up fairly tight, hitting them from each side alternately, then saw dowel and wedge off together, leaving about ½" to ⅜" extending past the surface.

Trim ends of all pieces as shown to suit

Drilling for dowels.



Making dowels

your artistic pleasure. Chamfer edges with a sharp chisel or knife. Don't use sandpaper anywhere; leave all tool marks as is.

Sign should be made of the same wood as post. Write or print the lettering on a paper pattern; rub the back side with a colored crayon and transfer the design to the wood by tracing over the lines with a medium hard pencil. Using a small hand carving gouge follow the center of the line with a sort of rocking motion, watching the direction of the wood grain all the time. Although this kind of carving is a cinch, I would suggest you try it on some scrap wood first.

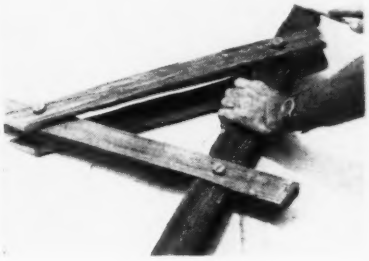
Fill the carved groove with two coats of white paint. When dry take a light plane cut off the surface. Stain the post and sign to your liking, then give all surfaces two or three coats of a good spar varnish or wood preservative.

Set the post about 18 to 24" into cement, being sure there is cement in the bottom of the hole and that it slopes up the sides of the post to prevent water from standing at the ground line.

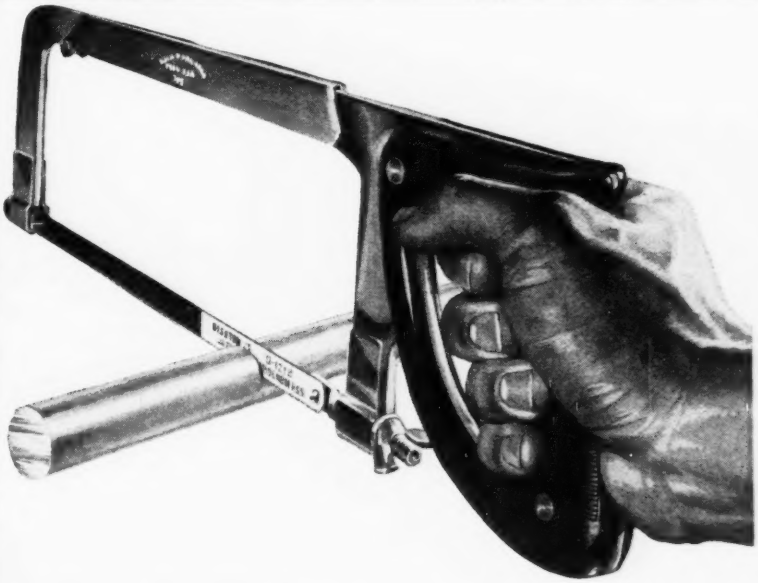
Dowel-wedge construction can be used on garden furniture, fences, etc. It takes all kinds of rough treatment, lasts practically forever and, like all "quality goods", looks better as the years go by.

Now how about it, why not try your hand at this eye-stopping signpost?

Dowels and wedges



Trimming.



DISSTON HAS THE EDGE. **in metal-cutting tools**

It's true! Whether you buy the great new Disston hack saw blades, Disston circular saws, or Disston metal-cutting band saws, you get master tools that give you smooth, fast cutting.

Disston hack saw blades, hand or machine, are the finest made. With their rugged strength and tough, super-sharp teeth, they give outstanding performance for cutting a wide variety of metals.

You can buy Disston hack saw blades and frames in your local hardware store. Use them for cutting bolts off license plates; for cutting tire chains, aluminum tubing, conduit, rods, sheet metal, machine parts; or use them in the kitchen for such items as frozen foods and bones.

Disston—America's foremost name in hand saws—makes many other great tools for home and industry: files . . . band saws . . . wood circular saws . . . dado heads . . . wood turning chisels . . . garden tools.

Henry Disston & Sons, Inc., 313 Tacony, Philadelphia 35, Pa., U.S.A.

In Canada: 2-20 Fraser Ave., Toronto 3, Ont.

(*Continued from page* 237)

Make the door as shown, and assemble with brass hinges. A hole is drilled through the door to receive the ring pull screw. Set the copper catch over the point of the screw, and solder.

After the final sanding, brush on a coat of white shellac. When dry, rub down gently with 0000 steel wool. Apply at least three successive coats of the shellac, and rub down after each coat. Finally, wax and polish.

If the stand is made from oak, after the sanding has been completed, paint on a coat of white oil paint, and wipe off immediately with a soft cloth. Then apply the shellac, as before. This will result in a gray oak finish that is very beautiful.

The idea of the door and shelf is to allow access to the cigarettes which may be stored inside. It is large enough to accommodate king-size cigarettes.

Electroplating

(*Continued from page* 214)

STEP FIVE: Quick copper strike. In cyanide copper tank at 6 volts. Watch for any spots or discoloration. Rinse well with clear water after the article has quickly covered with the thin copper layer. Dry and polish article until it is very clean.

STEP SIX: Nickel plating. For one gallon of solution add 16 ounces of single nickel salts, 3 ounces ammonium chloride, 4 ounces boric acid to one gallon of water. The temperature should be 75° to 85° F., voltage $1\frac{1}{2}$ to 2 volts (preferably $1\frac{1}{2}$). The anodes should be of 99 plus per cent rolled depolarized nickel. Hang article with copper wires into the nickel solution for 45 minutes to one hour. Remove, when well covered, rinse and polish.

Plating Non-Metallic Objects

The home electroplater will be interested in plating non-metallic objects, such as wooden and plastic articles, baby shoes, and so on. For this there is a special process; the article must be covered with some hard-drying material if it is porous. In the case of wood or leather, the pores would soak up the acid and would burn and shrivel. Some materials will decompose in acid, so they also must be well covered, and, some, as in the case of glass, may act as a non-conductor.

An interesting lamp, suitable for a teen-ager's room, a den or bar, may be made out of a Cola bottle, or any other bottle. You will need these parts: a bottle, brass socket, 6 ft. of lamp cord, bottle cap, male plug. Get a bottle cap that is new or not too bent and mutilated.

The hole in the bottom of the bottle for the electric cord must be drilled before plating. This is the most difficult part in making the lamp, for extreme care must be taken in order not to break the bottle.

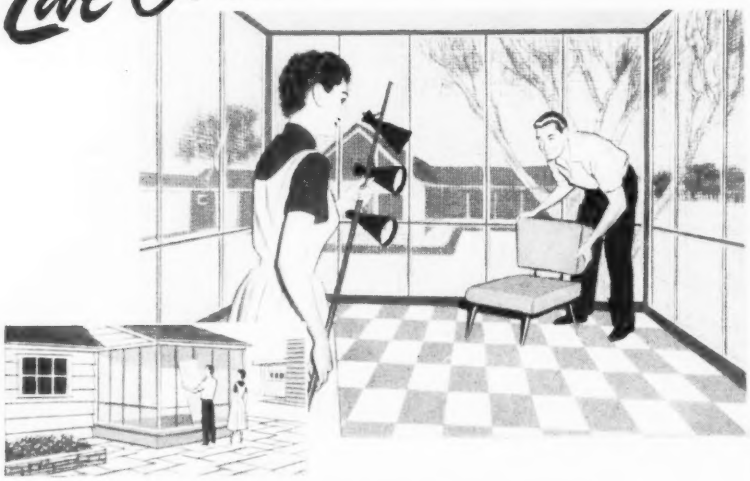
The easiest way to drill the hole is with a 3/16" or $\frac{1}{4}$" Carboloy drill bit. Use in either a drill motor, electric or hand drill of the egg-beater variety. Use turpentine for your cutting solution, dropping it a drop at a time on the drill point as you are "coring" the glass.

Another way to do it is as follows: Take a copper or brass tube with 3/16" or $\frac{1}{4}$" inside diameter. Taper the edge on one end of the tube slightly on the grinding wheel. Cut the tube to fit into the chuck of the drill press, leaving it extended far enough to slightly exceed the thickness of the glass to be drilled. Use the turpentine a drop at a time on the tube point, the same as you would a drill bit, until the hole is successfully drilled through. *Caution:* Do not force the drill into the glass. Allow drill or tube to take its own time with only a very slight pressure.

To plate the bottle, run a copper wire through the hole and up through the neck of the bottle, twisting the wire together and hanging it onto the copper hook on the cathode rod over the tank. Before hanging bottle into the copper tank, however, it must be cleaned first in the trisodium bath, then rinsed. After drying thoroughly a copper-liner solution now must be used to cover the article. This is called metalizing it. To mix this solution, use a small Pyrex beaker or pitcher for measuring, and pour in 12 ounces of lacquer thinner, to which is added two tablespoons of 400-grit super-fine copper liner. Use as a dip if the article is small enough; or for a bottle, spray with spray gun. Use in a well ventilated room only, away from flame, as this is inflammable. Allow the bottle to dry for at least thirty minutes after spraying on the solution.

Plating: Hang the bottle into the acid copper tank. For acid copper solution,

Live Outdoors in Luxury



...on the Screened-In Porch You Build Yourself with REYNOLDS *DO-IT-YOURSELF ALUMINUM**

It's quick, easy, with just woodworking tools... and aluminum never warps, rusts or rots.

You can make screens for your porch with simple tools like a saw, a hammer, scissors—and Reynolds *Do-It-Yourself* Aluminum. Ready-formed Reynolds screen frame members of good looking, non-rusting aluminum are easily cut and assembled with special corner locks. Attaching aluminum screening is quick and simple. Ask your dealer for Reynolds Plan No. 117—only 25¢.

Reynolds *Do-It-Yourself* Aluminum is perfect for regular window screens, too. Your dealer has FREE instruction sheets. And now Reynolds offers you New Easy-to-Assemble Do-It-Yourself Storm Sash interchangeable with Do-It-Yourself Screens!

AT YOUR HARDWARE OR BUILDING SUPPLY DEALER LOOK FOR THIS RACK CONTAINING

screen and storm sash sections • tubes • rod • bar • a wide variety of sheet designs • angles • fasteners • window hardware • Reynolon plastic film • trim strip • Do-It-Yourself Plans and Easi-Bild† Patterns.

REYNOLDS
DO-IT-YOURSELF
ALUMINUM

2488 South Third Street, Louisville 1, Kentucky

As Easy to Work as Wood

Available in Canada

†T. M. REG. EASI-BILD PATTERN COMPANY

*T. M. REYNOLDS METALS COMPANY

used entirely for the plating of non-metal objects, add 27 ounces of copper sulphate crystals or powder, and 6.5 ounces sulphuric acid to one gallon of water. The tank temperature should be 75° to 120° F., current density 15 to 40 amperes per square foot, and voltage ½ to ¾ volts for non-metals. For metals only, ¾ to 2 volts are used. The anodes should be of rolled annealed copper. The solution should be agitated if possible when plating non-metallic objects for better copper deposit. Spotswood uses a Junior horsepower motor to obtain slight agitation constantly of the cathode rods.

When the bottle is well covered, remove from solution, rinse with running water and remove wires. Buff and polish it. Oxidation by dipping in a liquid solution of liver of sulphur will give dark areas and will highlight the base for artistic effect.

Assemble the lamp by drilling the bottle cap through the center to fit the electric nipple in the base of the socket. Use an electrical lock nut to secure the nipple to the cap. You may have to trim the cap to make it fit over the bottle rim. File or grind the sides and edges of the nut until it is smooth. Screw bottom portion of socket to the nipple, run wire through cap and through hole in bottom of bottle. Wire socket in place. Cover with top portion of socket.

For this lamp, use a shade that will clamp to the bulb. Sometimes, if the bottle is tall and narrow-based, it is a good idea to fill it with pebbles to give weight and sturdiness to the base. Or fasten it to a wooden or plastic platform.

Plating Fresh Flower Blossoms

A very interesting, little-known plating process is the electroplating of fresh flower blossoms. Spotswood copper plated two oriental roses, among other flower jobs, for a lady whose husband had sent them from Japan. Since making clips out of them for her, he has received quite a few letters from persons interested in this process. Silver plating the blossoms would be much more effective than copper, he feels, as copper is prone to darken and discolor. Besides, silver or gold are precious metals.

Do not try to plate garden-fresh blossoms. But if they are sand-dried at room temperature for a period of from three to six weeks, there should be no difficulty in plating them.

Arrange the blossoms carefully in the shape you wish them to form, in a box of clean, white dry sand and leave at room temperature for the length of time you desire—from three to six weeks. There are methods of oven drying flowers, still using the white sand, but this is not always successful.

When dried, remove from the sand and carefully shake all sand from petals. Dip flowers into a solution of four-pound shellac cut 50% with alcohol. Dry well. The petals will be stiffened and a good base for the metalizer will have formed.

When this has dried well, spray the flowers with copper liner solution made by mixing 2 tablespoons of copper powder with 12 ounces of lacquer thinner, 2 tablespoons of clear lacquer and 1 tablespoon of acetone. Shake well together and use in small spray gun.

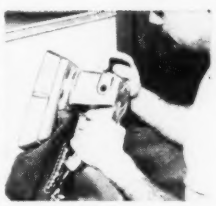
When this coating has dried, wire carefully with copper wire for good contact by forcing a small copper wire through the center of the flower. Hang into acid copper tank (non-metal) for 8 to 12 hours. When it has covered well, remove, rinse and scratch-brush with very soft brush to remove any pink oxidization that may have formed on it. Rinse and place in a nickel plating tank for 10 to 15 minutes (this is not necessary, but gives a better base for silver). Rinse.

Place in silver tank for a few seconds, using 6 volts for a quick silver strike for 2 or 3 seconds or until well covered with a thin layer of silver. Cut back the voltage to ½ volt and leave flower blossoms hang in the silver tank for from 2 to 4 hours.

The silver solution formula: One gallon of solution is made by adding 4 ounces of silver cyanide, 4 ounces of sodium cyanide and 6 ounces of sodium carbonate to 1 gallon of water. Tank temperature should be about 78° F. (about room temperature), the voltage ½ volt. The anodes should be of 1,000 grain silver. After the flowers are plated, clip or pin backs may be attached with glue or solder.

The home electroplater will find silver pieces are grist for his mill and that he may restore many priceless coffee pots and other pieces by mending and replating them. Spotswood watches the antique shops for old blackened pots, kettles and milk cans, which when buffed to their base metal often turn out to be made of solid copper.

Porter-Cable DUSTLESS Finishing Sander ONLY **59.50**


Ideal for cabinet work

Keeps dust off work

Instant Abrasive change

Porter-Cable's new Dustless Finishing Sander snuffs up 91% of the dust . . . prevents it from drifting about the house. Keeps cellar workshops clean. Eliminates the usual mess when doing inside repairs and remodeling. Lets you work on hobbies right in your living quarters.

Super-fast—Super-smooth. Outspeeds hand sanding 10 to 1—actually surpasses it for fine finishing. Abrasive pad rotates at high speed in ¼" orbits. Won't scar or mar. Flat surfaces are made satin smooth. Butt joints and inlays are polish-sanded with no hatch marks. On drywall joints and plaster patches, you're no longer exposed to the annoying, choking dust.

Important Features. Motor-driven for long, hard usage, AC/DC—4,000 RPM under load. Gearless drive—no troublesome operation, no expensive repairs. Patented paper clamp—keeps abrasive smooth and tight. Light—weighs only 6 lbs. Oversized dust bag at extra cost.

See Your Porter-Cable Dealer...

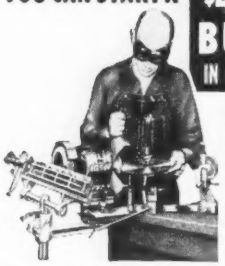
Get all the facts and a free demonstration. Or mail coupon for illustrated descriptive folder.

Porter-Cable
Quality Electric Tools

PORTER-CABLE MACHINE CO.
5063 N. Salina St., Syracuse 8, N. Y.
(In Canada, send to Strongridge, Ltd., London, Ont.)
Send me description and uses of new Dustless Finishing Sander.....also name of my nearest dealer.
Name.....
Address.....
City..... County..... State.....

Manufacturers of SPEEDMATIC and GUILD Electric Tools

YOU CAN START A **$40 A DAY BUSINESS IN YOUR SPARE TIME**



Andy Phillips says: "My BELSAW Sharp Smith gives me big profits at low expense — I can run 35 to 40 circular saws in an 8-hour day — that makes me $40 cash."

"I also get BIG EXTRA PROFITS... up to $4 an hour by grinding planer and jointer knives — there's always a demand for this kind of work."

You can start this REPEAT CASH business in your own home or garage while you are working at your regular job. Easy to operate, no experience needed. "Pays for itself from just 65 jobs." — *Harvey Jensen*

For as little as $15 down payment, you can get your BELSAW SHARP SMITH rushed to you.

FREE book tells how

YOU can start making money the very day your BELSAW SHARP SMITH arrives. Earns $4 to $5 an hour in your SPARE TIME sharpening and setting circular saws for builders, lumber yards, factories...Plus BIG EXTRA CASH, precision grinding planer and jointer knives, plane irons, wood chisels and drill bits. Hundreds of jobs in your own neighborhood. No extra equipment needed, no canvassing. Send today for your Free copy of "Life-Time Security."

LIFE-TIME SECURITY WITH YOUR OWN BUSINESS

BELSAW MACHINERY CO.
4004 Field Building, Kansas City 11, Mo.

Wanted! HOME PRODUCERS

By manufacturers in our Clearing House Service. Become a subcontractor, casting plastic products for these firms. Thousands of easy-to-make items wanted for consumer and industrial use. Cash in at home. No previous experience required. You set your own hours, spare or full time. Write today for FREE list of 100 most wanted items.

PLASTIC SERVICE ASSOCIATES
Dept. HH-3 East Boston 28, Mass.

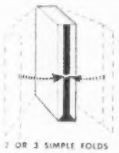
HOLDS A TWO-YEAR SUPPLY
REGULAR PRICE IS $1.00
SPECIAL PRICE: 75c EACH; THREE FOR $2.00

Do you keep your copies of HOMECRAFT?

These attractive, sturdy binders are simple to use—hold a two-year supply of the magazine—will keep your copies clean, handy, intact, in proper order, and upright for easy locating.

The binding edge has a space for dates; the back cover has a place for noting special references. The binders are made of a tough cloth-like heavy cardboard material that will last for years and years. When in use the binders look like a fine volume.

No COD's. Send money with order. We pay the postage.



2 OR 3 SIMPLE FOLDS AND IT IS ASSEMBLED

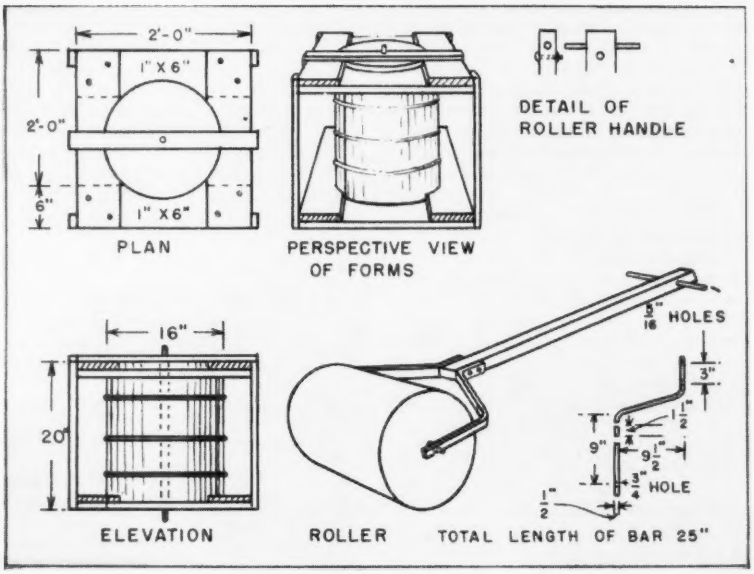
HOMECRAFT and the HOME OWNER
154 East Erie St.,
Chicago 11, Ill.

LOOKS LIKE A FINE BOOK

THERE'S FUN FOR THE WHOLE FAMILY!

SEND FOR OUR CATALOG which lists and illustrates tools, supplies and instruction aids needed for making hundreds of useful, attractive articles in metal, wood, leather, reed, raffia, pottery, etc. Also materials for weaving, basketry, block printing, bookbinding. Write today.

J. L. HAMMETT COMPANY
294 Main Street Cambridge, Mass.
WRITE TODAY FOR FREE CATALOG



HOW TO MAKE A LAWN ROLLER

Now's the time for it

By RAYMOND SCHUESSLER

MAKING a practical, long-lasting concrete lawn roller is a reasonably simple operation. The forms are assembled as indicated, fitting the clamps around the galvanized iron sheet which is bent to circular form with its ends overlapping. If necessary, the metal may be tacked to the clamps. An iron pipe is set in the exact center of the form, using wood strips with accurately bored holes to fit the pipe at top and bottom. Oil all surfaces with which the concrete will come in contact to make removal of forms easy.

Place the concrete in the forms, spading it well; smooth off the top with a trowel. Metal form may be taken off after about 48 hours and any holes in the surface filled with 1:2 portland cement-sand mortar. Allow roller to cure for at least 10 days, wetting thoroughly every day. After it has cured thoroughly, the roller may be assembled as in drawing. A handle such as shown in the drawing can be obtained from your local hardware dealer, or made with pipe and fittings as shown. And then you push, push, a-push!

Build MODERN CABINETS

Shows HOW

● Remodel your kitchen by building these up-to-date cabinets. You can build a single unit or any combination of units from plans in this new book. Complete drawings, instructions, and lumber cutting lists. Styles and sizes to fit every kitchen. Floor and wall models. Following types of cabinets included: 1—Sink. 2—Bread drawer. 3—Single door. 4—Drawer. 5—Double door. 6 & 9—Corner. 7 & 8—Wall units. 10—Broom closet or storage. 11—Desk and storage.

NOW READY! The only book of its kind to give you all the help you need for modernizing your kitchen at low cost. Send order on a postal card. When MODERN KITCHEN CABINETS book arrives pay postman price plus C.O.D. postage. Hard cover de luxe edition $2.00. Write Craftsman Publishing, Dept. PH-3, 115 Worth Street, New York 13, N.Y.

TRY SUPERSHOP FREE

Factory To You—$79.95

Think of the fun you'll have and the money you'll save with your own big capacity workshop. Picture yourself sawing with the 8" ball bearing saw. Or drilling in steel with the vertical drill press. You bore with the horizontal drill. You sand with the 8" disc sander. You turn with the 30" lathe. You sharpen tools on the 5" grinder.

VERTICAL DRILL PRESS

You are invited to TRY SUPERSHOP FREE. We will pay all shipping expense. Write for full details of this amazing FREE TRIAL PLAN. Mail postcard now.

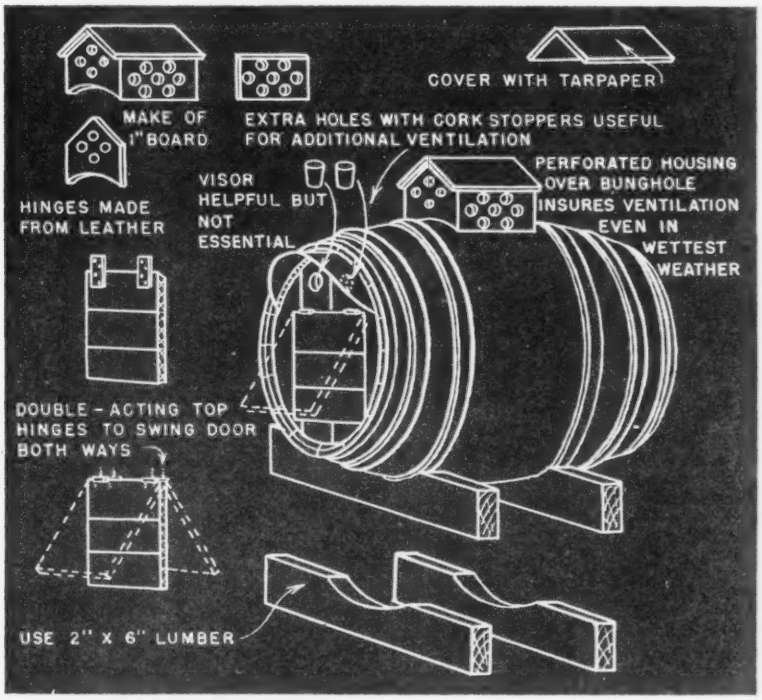
POWER TOOLS INC. 570 Yates Avenue Beloit, Wisc.

ROLL OUT THE BARREL FOR MAN'S BEST FRIEND

By RAYMOND SCHUESSLER

BEFORE beginning work, deodorize the barrel with diluted creosote. If a well-constructed barrel is selected, the barrel doghouse will be rain- and snow-proof; warm in winter and cool in summer. Almost any long-coated dog can be safely kept in such a house even in the coldest weather. If bedding is desired, shredded newspapers serve excellently.

The 2x6 supports not will only keep the barrel from rolling but will prevent early decay, dampness and draughts. The house should face east or south and should be kept out of the direct wind. It should be so placed that the sun can reach it a good part of the day during every season. Occasional sunning of the interior of the house through the hinged door will help prevent odors and vermin.



SAVE MONEY on LUMBER with the LOW-COST BELSAW PLANER

Convert Rough and Random Size Lumber Into Cabinet Finished Stock.

Now anyone can make perfect cabinet finished stock from low-cost rough lumber... any size up to 12¾ inches wide and 6 inches thick. Turn out high grade finished material at a fraction of the cost you pay lumber yards. Big 42-inch-long bed makes it easy to plane heavy, wide and long pieces ...BELSAW self-feeds at 14 to 34 feet per minute.

USE THIS ONE LOW-COST MACHINE for Planing, Jointing, Sawing, Milling, Tongue and Groove.

You can easily make flooring, siding and many other popular patterns with your Belsaw. Your Belsaw quickly pays for itself with savings on raw materials and profits on finished stock ..a highly profitable machine for custom work.

Compare Belsaw with any 12-inch planer on the market...Belsaw gives you more essential features yet costs you $50 to $125 less than others.

Send Today for Free Literature on the Belsaw Multi-Duty Planer.

BELSAW MACHINERY CO
1309 Field Bldg. Kansas City 11, Mo.

ANTIQUE COPIES 32 Full-size Patterns $1

Authentic Colonial Reproductions. Easy to build, just trace and saw out. Shelves, stools, what-nots, etc. Included FREE: Instructions for Fast Shellac and Wax Finishing. Send $1 today!

VOSBURY PATTERNS
561 Conklin Ave., Binghamton, N.Y.

Save $40!

...WITH AMAZING "ARCO JIG-SAW" ONLY $10.95

First to fit 1¼" drills, this rugged portable jig-saw attachment has same capacity & precision as $55 saws. Does work of jig, keyhole, coping, rip, band & hacksaw! Built-in "Air-Jet" blows away sawdust. Guaranteed to cut intricate patterns—however large—in plywood, plastics, metals—even cuts 2x4's! Starts inside holes without boring. Converts to Table Model with

"ARCO STAND" Sturdy Casting & Clamp $2.75
6 BLADES for wood, metals, plastics, etc. $1.95

SOLD AT BETTER HDWE. STORES. If not available, try this amazing tool on our UNCONDITIONAL 10-DAY MONEY BACK GUARANTEE. Send check or M.O. (ppd.). C.O.D.—plus post.

ARROW METAL PRODUCTS CO.
Dept. PH-3, 140 West Broadway, N.Y. 13, N.Y.

BARRON Drill Press TOOLS

ROTARY PLANER

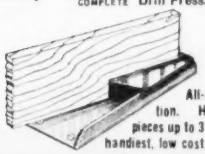
Planes • Rabbets
Tenons • Panels
Routs • Bevels

Only $8.50 COMPLETE

FOR WORKSHOP AND INDUSTRIAL USES...

● Over 40 precision built woodworking tools and accessories... Hi-Speed Router Bits—Rotary Surface Sanders & Drum Sanders—Safety Shaper Cutters—Dovetail Cutters—Large Auxiliary Metal Tables—All Metal Shaper Fences—Spindle Adapters—Handy Bench Vises. Many other items indispensable for accurate, useful, versatile workshop use. Every tool sold on complete satisfaction or your money back. See your Barron Dealer. Ask for special folder—"24 Extra Uses for Your Drill Press."

FREE Workshop Guide & Catalog



AN ALL-PURPOSE BENCH VISE Only $2.25 Prepaid

All-aluminum construction. Holds long .. short pieces up to 3½" wide. Slickest, handiest, low cost vise. Fully guaranteed.

BARRON TOOL CO., INC.
801 Architects Bldg. Detroit 1, Mich.

TORK CLOCKS
WORLD FAMOUS TIME SWITCHES

TURN ELECTRIC LIGHTS, OIL BURNERS OR A THOUSAND OTHER THINGS ON and OFF REGULARLY WITHOUT ATTENTION!

ANY TIME YOU SAY

Pay their own way—quickly. Plug-in or installed types.
BE SAFE — BE SURE

DON'T BE IN THE DARK

TORK CLOCK CO.
MT. VERNON • NEW YORK

A DO-IT-YOURSELF CLOCK KIT

for installation in your own cabinet or room panel. Available in a finish of black, aluminum or brass. Comes complete with electrical movement, 4" center disc, hands, dots, markers or numerals. Only $9.95.

Write for descriptive literature

Ultra-Craft Designs Box No. 167 Grand Rapids 1, Mich.

DOG BONE 10-WAY WRENCH 59¢

One Tool that can handle a million and one jobs effortlessly for it will fit almost all size nuts and bolts, squared or hexagon shaped (1/4" to 9/16"). The DOG BONE WRENCH is a veritable tool box all in one wrench. Use in the home, your car or office, aboard boats, for electrical and garden appliances. Every mechanic, machinist and hobbyist needs one. You will never miss any one size wrench when you need it for the DOG BONE has 10 sizes to fit all nuts and bolts. Made of Tempered Tool Alloy Steel with I Beam shaped reinforcement handle. **Only 59c** (Special Offer 2 for $1). De-Luxe Model, Chrome Plated & Polished 98c. Send check, cash or money order to:

NOVEL MANUFACTURING, Dept. D-099
33 Second Avenue - - New York 3, New York

Now you can spray

New 3-in-one Oil-Spra lubricates and forms a barrier against rust! No more messy rags—oily fingers! Sprays oil at touch of button!

"3-IN-ONE" OIL

REMOVE PAINT

. . . not coat by coat but all in one easy scraping!

Wonder-Paste turns paint, varnish, enamel, etc., to a soft sludge that's easy to remove. Clings to upright surfaces. Excellent indoors or out. At paint and hardware stores.

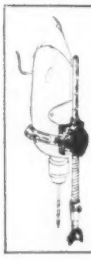
• *Write for leaflet—and advice on your removing problem.*

WONDER-PASTE
Wilson-Imperial Co., 128 Chestnut St., Newark 5, N.J.

OWN a Business

If employed, start part time. Alert dealers can gross $5 hourly profit on own service plus $5 on EACH serviceman. Clean, revive, mothproof rugs & upholstery on location. No shop needed. We locally train and assist you. Nationally advertised world-wide services. Quickly established. Easy terms. Send today for FREE booklet. No obligation.

Duraclean Co., 5-134 Duraclean Bldg., Deerfield, Ill.



Hi Standard GUID-O-DRILL

Fits any portable drill. Do more work better, faster and easier. Easy to install. Easy to use. Drills or reams a perfect hole every time . . . vertical . . . horizontal or at any angle. Added feature Built In Depth Gauge to assure accuracy. Complete with instructions and full guarantee.

$6.95 postpaid

Send for free catalog

"Do it better-easier" tools

EAGLE PRODUCTS
Box 84 A-41 Meriden, Conn.

ALPHABET

Monograms • **PATTERNS** • *Numberals*

Multi-purpose—Numerous craft uses. Wood cut-outs, monograming, metal work, leather tooling and many other applications. 14 distinctive alphabets-numerals. More than 500 individual patterns. Various sizes, from ½" to 4" high. $1.00 postpaid.

WALKER STUDIO—P-2A
4333 Lindell Blvd. St. Louis 8, Mo.

MAHOGANY END TABLE

An easy entre into "fine furniture" workshopping

By ROBERT D. WRAY

HAVEN'T you envied a piece of furniture made from beautifully figured hardwood, and wished that you could tackle such a project in your own shop? Many home workshoppers are shying away from some of the more attractive furniture woods because they feel that such woods are too hard to work with and too expensive to buy. If you are one of these, you're missing a good bet in Philippine mahogany. Here is a tropical hardwood that is richly red in color, distinctively figured, yet remarkably easy to saw, plane, drill, and sand. Moreover, you can buy this wood at most large lumberyards for little more than the better grades of some of the more common species.

Prove all this to yourself by starting out with the simple, modern end table shown here. The entire table is made from narrow strips not more than 2½ feet long. The shelves are glued up from ¾" stock; and the legs, shelf braces, and aprons are made from strips ½" thick. Here is all the material you will need:

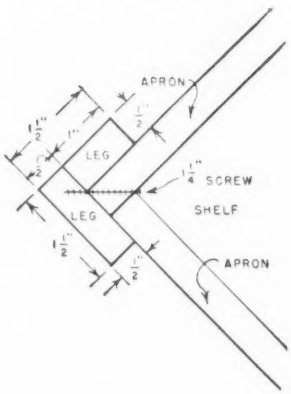
2 panels 16 x 30 x ¾" 2 panels 7 x 16 x ¾"	Shelves: Glue these up from several narrow pieces.
4 pieces 28¾ x 1 x ½" 4 pieces 28¾ x 1½ x ½"	Legs
4 pieces 16 x 1¼ x ½" 4 pieces 29 x 1¼ x ½"	Aprons
2 pieces 22½ x 1 x ½"	Shelf braces
8 pieces 1 x ½ x ½"	Shelf cleats

Flathead wood screws:
- 1¾"—for fastening aprons to top and bottom shelves.
- 1¼"—For fastening legs to aprons.
- ¾"—For fastening shelf braces to aprons and small shelves to cleats.

1" brads—For holding leg pieces in place during gluing.

Glue

Top View of Leg Assembly



First glue up the shelf panels. Unless you are equipped with a power sander and a lot of patience, it probably will be a good idea to make these panels from rough stock and have them planed to thickness at your lumberyard after the glue has set.

Each leg is made from two ½" strips 28¾" long: one 1" wide, and the other 1½" wide. Glue the edges of these strips together at right angles as shown in the drawing to form an L-shaped leg with two 1½" sides. A couple of 1" brads will help hold the pieces in place for gluing. The finished leg looks square but does not require a solid piece of wood; it is light in weight but plenty strong. More-

over, this type of construction hides the corners of the aprons so that these pieces need not be mitered but can be butt-jointed. If these legs are carefully glued, sanded, and finished, the joint between the two pieces will be practically invisible.

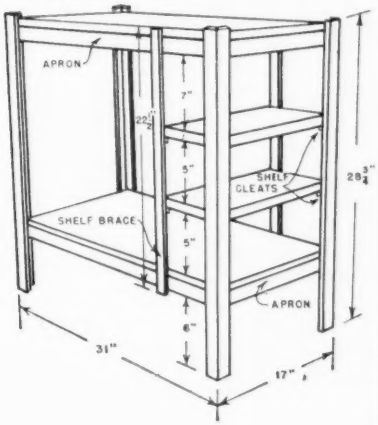
Drill and countersink the aprons and screw them to the bottom side of the two larger shelves. Space the screws about 6" apart. If you wish, you can glue the side aprons to the shelves in addition to fastening them with screws. But do not glue the end aprons. Wood does not shrink and swell the same across the grain as it does with the grain—so cross-grain joints, especially long ones, should not be glued.

Fasten the legs of the two shelf-apron assemblies with glue and one $1\frac{1}{4}$" screw per leg. Drive the screw diagonally through the apron joint and into the corner of the leg. Attach the top shelf first and then the bottom. If you intend to cover the top with glass, allow legs to extend $\frac{1}{4}$" above top shelf to serve as stops to hold glass in place.

Glue and screw the two shelf braces in place, driving the $\frac{3}{4}$" screws from the inside of the apron. Drill and countersink the 8 small, wooden cleats and fasten them to the shelf braces and to the adjacent legs with glue and $\frac{3}{4}$" screws. Glue the two small shelves in place on these cleats and the assembly job is done.

Finish in clear varnish or shellac to up show the grain to best advantage.

Perspective View of Finished Table



THESE ARE THE CURRENT BEST-SELLERS AMONG WORKSHOP BOOKS

(904) **ALL ABOUT HOUSE WIRING**—New how-to-do-it book covers all phases of modern house wiring. Takes "mystery" out of house wiring. Tells how to determine exactly what wiring is needed; shows in 192 crystal clear drawings. Easy way to do all kinds of wiring jobs in both new and old homes. (Goodheart) **$2.50**

(529) **24 DESKS**—Governor Winthrop secretary, spinet, kneehole, mariner's, corner model, sectional, flat-top formal, junior size, portable, telephone. Supplementary section features wastebaskets, book ends, tables. (Hobby Books) **$1.00**

(621) **BOOK CASES**—Book cases and shelves, magazine and book racks, book ends. Walnut, mahogany, birch, other woods. (Hobby Books) **$1.00**

(617) **56 LAMPS**—56 lamps and lanterns—floor and table lamps, nursery and desk lamps, novelty lamps, pinups, etc. Woods, metal, plastic combination. How to make lamp shades. (Hobby Books) **$1.00**

(708) **BE YOUR OWN TELEVISION REPAIR MAN**—William E. Prior, Jr. 324 diagrams of famous-make sets with full directions for replacing defective tubes, getting rid of disturbing, focusing the picture correctly, etc. (Greenberg) **$1.00**

(727) **BEDROOM FURNITURE—PERIOD AND MODERN**—V. E. Broadbent. 56 intelligently designed pieces of bedroom furniture—period and modern. Each is accompanied by photos and drawings, bill of materials, directions. Projects range from simpler pieces to those more difficult. (Bruce) **$4.00**

(513) **GARDEN FURNITURE** — Chairs, tables, benches; chaise longues; couches; outdoor desk; shelters; bower, bowls; wind mill for atop your garage; wheel barrows; fireplaces; swings; outdoor lamps; garden swimming pool; terrace sun dials; wishing well; hose reel; garden umbrella. (Hobby) **$1.00**

(515) **FENCES, GATES, TRELLISES**—Arbors and trellises, gates and fences, garden shelters, terraces, pools, rock gardens, walks, lawn and garden novelties, pedestals, barbecues, greenhouses, yard lights. (Hobby Books) **$1.00**

(516) **BIRD HOUSES, FEEDERS, BATHS**—28 designs: log cabins; teepees; colonials; African, marine; cafeteria; martin, streamline, etc. Will attract 27 kinds of birds. Made from lath, logs, scrap lumber, celluloid, concrete, metal. (Hobby) **$1.00**

(575) **LEATHER PROJECTS**—Wallets and billfolds, belts, letter and key cases, purses and handbags, photo and toilet cases, camera and stationery cases, wastebasket, book marks and ends, ladies' accessories, chasing dyed leather, pictures in leather. (Hobby Books) **$1.00**

(678) **HOW TO BUILD A RECREATION ROOM IN YOUR BASEMENT OR ATTIC**—Baer. How to build basement recreation room; how to make the most out of its finishing the attic; more ideas for upstairs. Designs, materials, methods, equipment. Hundreds of how-to photos and drawings. (Homecrafts) **$1.50**

(553) **HOW TO BUILD MODERN KITCHEN CABINETS**—With this book you can build a single unit or any combination of units. Floor and wall models to fit every layout. Complete drawings, instructions and lumber cutting lists. How to plan the remodeling work, select hardware, install each cabinet. (Craftsman) **$2.00**

(556) **WALT'S WORKSHOP**—Durbahn. 52 projects for the workshop, home, garden. Easy-to-follow diagrams. Text in clear, non-technical language. Illustrated. (General) **$1.00**

(676) **BOOK OF SUCCESSFUL FIREPLACES AND HOW TO BUILD THEM**—Dalley. Designs of types fireplaces with detail measurements that insure good results. Describes projecting corner and side wall fireplaces which give two-way and three-way views of the flames. Also installations for outdoor cooking on enclosed porch, in basement recreation room. Illustrated. (Dalley Brothers Co.) **50c**

(733) **COMPLETE BOOK OF BUILT-INS**—William J. Hennessey. An idea book to modernize homes with full instructions for making everything from radiator enclosures to complete storage walls. 25 illustrations. (Harper) **$3.50**

(926) **THE COMPLETE BOOK OF BASEMENT IMPROVEMENT**—Frank Tenney. Detailed instructions on how to build staircases, closets, breakfast nook, bar boards, refreshment bars and furniture, and how to solve all your basement problems with hundreds of easy-to-follow plans and photographs. (Wyn) **$4.95**

(935) **HOW TO BUILD YOUR OWN GARAGE**—Choice of 25 attractive garage and carport designs built of wood, brick or concrete block. Fully illus. (Pop. Mech.) **$3.50**

(944) **SUCCESSFUL FIREPLACES, HOW TO BUILD THEM**—Plans, tables, recommended sizes, finishing treatments. Over 300 illustrations. Includes masonry fireplaces, conventional & modern; corner, 2-way, 3-way designs. 80 pages, 8½ x 11. (Dalley) **75c**

(594) **PROJECTS IN METAL**—Copper, tin and brass; pewter; tables and stands. Gold plating, electro plating and etching, nickel and cobalt plating, metal spinning. Fireplace sets, chimney and shutter ornaments, lanterns and lamps, iron tables, wall boxes, decorative novelties. (Hobby Books) **$1.00**

(596) **METAL NOVELTIES**—Hand-wrought novelties in copper, brass, pewter, iron, aluminum. Hand-wrought novelties, lamps, spinning, articles of copper. (Hobby) **$1.00**

(648) **DOLL HOUSES & FURNITURE**—40 doll houses and furniture items for someone you love to spoil. Complete instructions supplemented by more than 200 photos and drawings. (Hobby Books) **$1.00**

(649) **45 TOYS & GAMES (FOR JUNIOR YEARS)**—Scooters and jeeps, roller coasters and skate sails, spiral railways and model airplanes, slingshot guns and indoor tennis tables. (Hobby Books) **$1.00**

(650) **CHILDREN'S PLAYHOUSE, PLAY PENS, FURNITURE**—5 playhouses complete in every detail. Swings, play pens, slides, other outdoor games. Furniture for children's room. (Hobby Books) **$1.00**

(656) **WOOD-CARVING AS A HOBBY**—Faulkner. The author is sought as a teacher, and his family work is widely known. His illustrations show a skilled devotion to his craft. (Harper) **$2.00**

(659) **CARVING ANIMAL CARICATURES**—Walters. Basic fundamentals for carving animal caricatures. How to select proper wood; how to finish; instructions for using knife, etc. (M. Knight) **$1.50**

(681) **BETTER FRAMES FOR YOUR PICTURES**—Taubes. Every process in the making or refinishing of frames is explained. Different specific finishes for raw wood, gesso and gilt frames. Frames required for oils, water colors, prints and reproductions. (Studio Criswell) **$3.75**

(670) **PICTURE FRAMING**—Landon. Every phase of picture framing from mounting, matting, lining, glass cutting and joining to finishing. Information on tools, materials, and supply. (Harlem) **$2.75**

HOBBY BOOKS DIV., General Publishing Co., Inc., 154 E. Erie St., Chicago 11, Ill.

I enclose $..... Please ship me postage-paid the books whose order numbers I have circled below:

904	529	521	617	708	727	513	515	516	575	678
553	556	676	733	926	935	944	594	596	648	649
650	656	659	681	670						

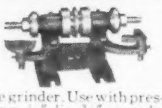
NAME _____

ADDRESS _____

CITY & ZONE _____ STATE _____ 455

Improved HEAVY DUTY GRINDER

Keep your tools, knives, etc. Extra Sharp! $12.95



Heavy-duty multi-purpose grinder. Use with present motor. Arbor-13½" long, ⅝" dia, ¾" on ends. 2 comb. V-flat pulleys. Loose pulley locks with set screws for double V-drive. Long wearing oilite bronze bearings. Oil well each end. Rests included.

DURA-TOOL

Send MO, check, or order COD. Satisfaction Guaranteed. Immediate shipment. Postage Paid. Write for FREE CATALOG.

CLIZBE BROS., Plymouth, Indiana

YOUR CIRCULAR SAW IS A JOINTER-SANDER

with a TAPEREDGE SANDING DISC mounted in place of the blade. Tapered edge allows feeding work same as to saw blade. Makes perfectly straight edges or mitres for joining. Price with 6 assorted abrasive papers and adhesives—8" size, $4.00, 10" $5.50 postpaid. STATE ARBOR SIZE. Satisfaction or money back.

M. D. Lee, Box 22H,
Irondequoit Br.,
Rochester 17, N. Y.

WOODWORKING

LEARN The Easy Way!

Low Cost Home Craft Courses Now Available

Make money. Become a skilled woodworker. Interstate's new woodworking course tells and shows how to turn out hundreds of professionally constructed and finished wood projects with hand and power tools. Twenty-two profusely illustrated manuals. Over 1,000 pages. Over 75 projects. Written by expert instructors. The *only* complete course available today! Get full information without obligation . . . today.

HOW TO BE A SKILLED WOOD WORKER

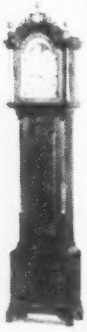
WRITE FOR FREE BOOKLET

INTERSTATE TRAINING SERVICE
SCHOOL OF WOODWORKING
Dept. F-35-C, Portland 13, Ore.

89 JIG SAW PATTERNS $1 · UP TO 21" HIGH ·

89 FULL SIZE patterns of beautiful Wall & Corner Shelves, Bird Houses, Action Toys, Novelties, Lawn & Animal Figures, Flying Duck, Sprinkling Girl PLUS dozens of other easily made things. Just trace, cut out & paint! We tell you How & Where to sell. Order the JIG SAW PACKET today! Only $1.00.

MASTERCRAFT PLANS Dept. 34-H
7041 Olcott Ave., CHICAGO 31, ILLINOIS



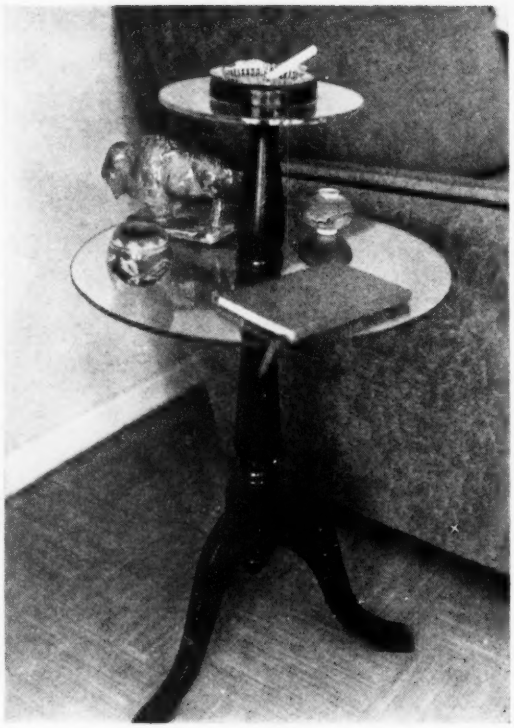
CLOCK MOVEMENTS

Grandfather & Grandmother. Large selection other movements. Barometer units. Large selection case plans. Dials and fittings. Largest stock in U.S.

Send 25 cents for large 16-page 1955 brochure.

R. W. HOLWICK
P.O. Box 3062, Ventura, Calif.

ADDRESS POSTCARDS AT HOME!!
write BOX 14, BELMONT, MASS.



TIER TABLE AND SMOKING STAND

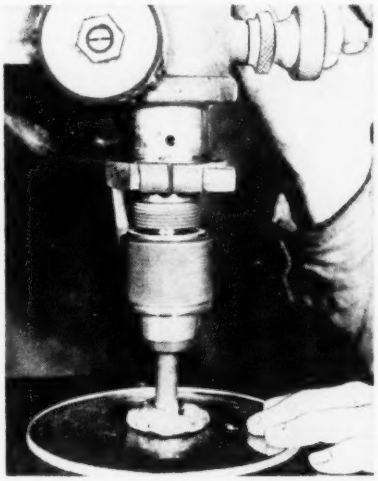
By D. C. MARSHALL

A combination tier table and smoking stand makes a double duty piece of furniture. The glass shelves on a wood pedestal bring together the artistic lines of the colonial and the utility of the modern.

The post is turned in one piece and then cut where the lower shelf fits in. The feet are sawed out on the bandsaw and finished on a drum sander. They may be attached by dowels or with a mortise and tenon joint. The ash tray is turned and a glass liner fitted before it is removed from the lathe.

The glass shelves are made of plate glass—or crystal sheet which has the same thickness as plate but is much cheaper. If your workshop is equipped with a wet sander, the glass circles may be cut and the edges ground; otherwise they may be purchased already cut and ground, with a nominal charge for grinding.

A hole must be drilled in the center of each shelf. The hole in the upper shelf is drilled with a saw file that has been ground to a sharp point on the end. A

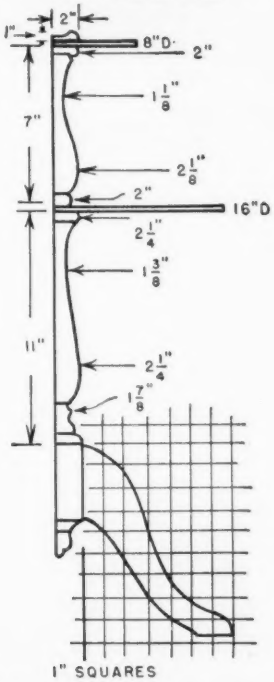


Holes are quickly drilled in a glass plate with a brass tube revolved in the drill press. A putty dam around the drill holds turpentine to lubricate the drill. Cutting is done with carborundum grain.

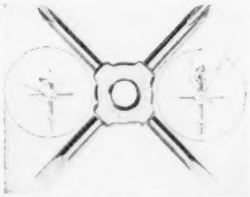
putty dam is formed around the joint of drilling and is filled with turpentine to lubricate the job. This hole need be only large enough for a No. 10 screw. The hole in the lower shelf should be ½" in diameter; it is drilled with a brass tube in the drill press. A putty dam also is used here, and the cutting or drilling is done with valve grinding compound or carborundum grain.

The two sections of the post are fas-

The curved feet are sanded on a drum sander revolved on the lathe.



tened together with a dowel screw. Two ⅜" x 2" lag screws are used. The heads are cut off and the two welded together. Anchor holes are drilled in the post and the dowel screw is screwed into the lower section. The lower shelf is put in place and the top section of the post then is screwed on. A felt washer on each side of the glass will provide pliable support for the shelf. The wood ash tray has a screw hole in the center. The upper glass shelf is put in place and the tray then is fastened to the top of the post. This holds the upper shelf in place. The glass tray liner covers the screw. The finish on this table which was made of walnut was wood filler followed by a rubbed varnish.



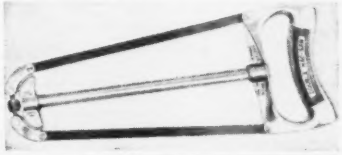
Even My Wife Likes This Screwdriver

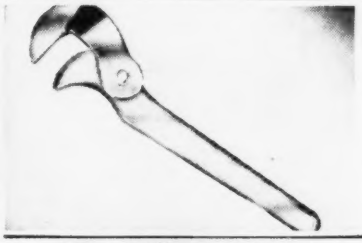
Frankly, she doesn't know a claw hammer from a jack plane. But she sure knows she likes my Phil Uni Drive. The one that *used* to be mine she keeps in the kitchen drawer. So I had to get another for my workshop. I want to get one more now—for the glove compartment of my car. It's 4 screwdrivers in one, and a darned practical deal. Two are Phillips recessed head type, and two are flat screwdrivers; all four different sizes. This arrangement gives extra leverage; it also let you "spin" a screw out fast. I really like this gadget.

It's cheap—only $1.00

Skip This If You're In Love With Your Old Hack Saw

. . . because this Double Hac-Saw is *two* hack saws in one frame—a fine blade for light work, and (without changing blades) a coarse blade for the heavier cutting. It makes cleaner, more accurate cuts without wobbling or fear of snapping. Keen cutting characteristics come from the tight-as-a-drum blade tension which is not possible on the old fashioned kind of frame. The trick is in the frame design and the single locking nut. Extra blades can be stored in the hollow frame. Cuts a full 5" diameter. All metal. Light, strong, and inexpensive . . . **$5.00**





Simple Tool of a Thousand Uses

Most workshoppers have more wrenches than they'll ever need. I do. But when I came across this new Ply Wrench I said, "That's for me!" I like it because I can get into places with it that I usually skin my knuckles on when I use a regular wrench. It has a terrific gripping power and a three-sided pull. Automatically adjusts to any size from ⅛" to 1⅛". Measures 7" overall. I use it now more than I do any of the regular wrenches which cost me three times as much, because it's so much faster and easier.

Worth more than its $1.29

Adjustable Angle Jig for Circular Table Saws

Every table saw owner *needs* one or more of these Adjustable Angle Jigs with steel protractor. Protractor eliminates need for ruler. Indispensable for making accurate angle cuts. No clamps or bolts to fasten. Glides along the table fence, carrying the wood with it. Will cut a true, precise taper. Also will taper 1, 2, 3 or 4 sides. 12" length cuts 0° to 23°, and tapers 0" to 4½"; 15" length cuts angle 0° to 24°, and tapers 0" to 6". Made of hard maple with cadmium-coated steel rust-proof clamps.

Priced at $2.95 for 12"; $3.45 for 15"

YOU GOTTA HAVE THIS!

If you're like me about your ¼" electric drill you use it for everything. Believe me, I do. Even my wife uses it—largely for polishing. I have just about every ¼" drill attachment made—but the one I use most now is the newest one, this Lyndane Sanding Drum Kit. What a labor saver! With it, there's hardly an interior curved surface you can't sand by power now. Man, that's *really* something. The Kit includes 4 sanding drums (¾"-1"-1½"-2") and 8 sanding drum sleeves. Those sizes have met all my needs completely. *This* part you'll like too—

The whole kit costs only $3.98

Take It Easy Chum; You'll Live Longer

Hauling nails out of wood the old way is rough on the bursitis. It just about kills me. But this Cat's Paw Nail Puller is the cat's something-or-other. Not only does it make pulling even the big nails easy, but it saves scarring the wood unnecessarily. You can get in tight corners where a hammer won't fit, and you can work just about twice as fast. That spoon-shaped head is what does the trick. It slides under the nail head nice and easy and rocks it out just as easy as that ol' rocking chair. Light weight, 12" long, and oh, so tough.

You can't go wrong for only $1.50

YOU CANNOT BUY ANY OF THESE ARTICLES FOR LESS ANYWHERE; I EVEN PAY THE POSTAGE

BELL SALES, Rm. 602, 666 St. Claire St., Chicago 11, Illinois

I enclose $..... to cover the following items:

☐ Ply Wrench @ $1.29; ☐ Adjustable Angle Jig @ $2.95 for 12"; ☐ $3.45 for 15" Adjustable Angle Jig; ☐ Double Hac-Saw @ $5.00; ☐ Phil Uni-Drive @ $1.00; ☐ Sanding Drum Kit @ $3.98; ☐ Cat's Paw Nail Puller @ $1.50.

Send above items postpaid.

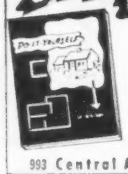
NAME .....

ADDRESS .....

CITY & ZONE .....

STATE .....

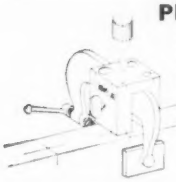
Big New 24-Page Profusely Illustrated DO-IT-YOURSELF PROJECTS BOOK



Describes attic finishing, built-in cabinets, add a room, recreation room, kitchen remodeling, summer cottage and farm projects. Contains helpful information on how to get started: planning, cost estimating, materials purchasing and proper procedures, also nail chart, moulding designs, etc. Send only 25¢ and also receive FREE 52 PAGE POWER TOOL CATALOG.

BOICE-CRANE COMPANY
993 Central Ave., Toledo 6, Ohio

PERFECT JOINTS



Use LEE DOWEL JIG and you will drill accurate dowel holes on any edge, surface or end. Indexes on two axes. Rig and Clamp as shown. $4.50 postpaid. Matching bits insure perfect fit. $2.75 set. Satisfaction or money back.
M. D. Lee, Box 22H, Irondequoit Br., Rochester 17, N.Y.

CAN YOU READ
The STEEL SQUARE Correctly?

You Can If You Have This Chart
BLUEPRINT 27" x 36"

Explains tables on framing squares. Shows how to find the lengths of any rafter and make its cuts; find any angle in degrees; frame any polygon 3 to 16 sides, and cut its mitres; read board feet rafter and brace tables, octagon scale. Gives other valuable information. Also includes Starting Key and Radial Saw Chart for changing pitches and cuts into degrees and minutes. Every carpenter should have this chart. Now printed on both sides, makes about 13 square feet of printed data showing squares full size. See your hardware dealer. If they cannot supply you—send $1.25 to **Mason Engineering Service, 2107 N. Burdick, Kalamazoo, Mich.** 10-day money-back guarantee. **For Canadian prices, write Curry's Art Store, 756 Yonge St., Toronto, 5.**

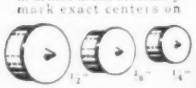
101 · GIFT & NOVELTY · PATTERNS $1

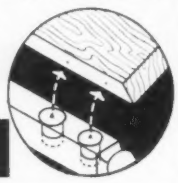
This wonderful packet contains 101 FULL SIZE patterns—up to 24" high—of the smartest Lawn Figures, Bird Houses, Sleigh, Action Windmills, Signs, Alphabets, Gifts & Novelties you have ever seen! Just trace and saw out. You also get "Make Money Jig Sawing"—All for only $1.00. Send for this GIFT & NOVELTY PACKET today!

MASTERCRAFT PLANS Dept. 35-H
7041 Olcott Ave., Chicago 31, Illinois

Easy, Accurate Dowel Pin Alignment with KENKRAFT DOWEL CENTERS

NOW—accurately transfer dowel hole locations between mating pieces without mismatch. KenKraft Dowel Centers slip snugly in drilled holes, accurately mark exact centers on mating pieces, eliminate measurements, assure perfect register. Furnished in pairs for ½", ⅜" and ¼" holes, complete set (6 centers) sent postpaid $1.00.





Send $1.00 bill, check or money order today!

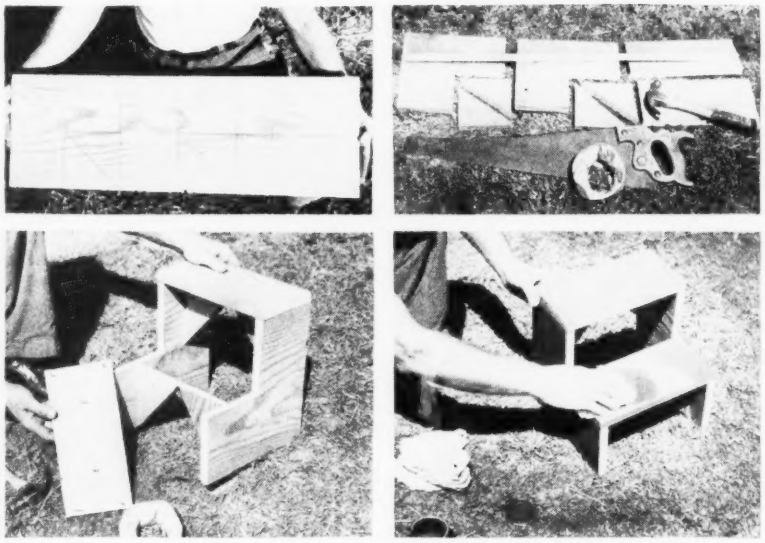
KENKRAFT
BOX 596, DEPT. I
MANHATTAN BEACH, CALIF.

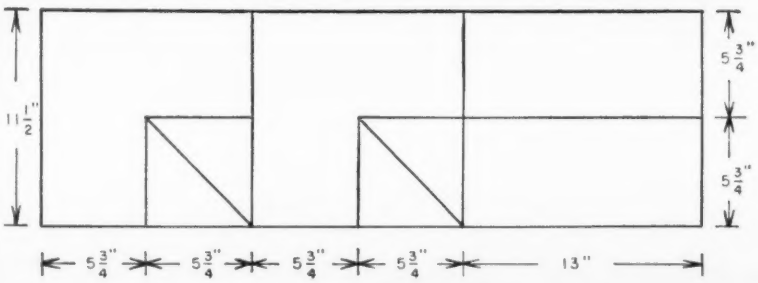
GARDEN POOLS · LIGHTING

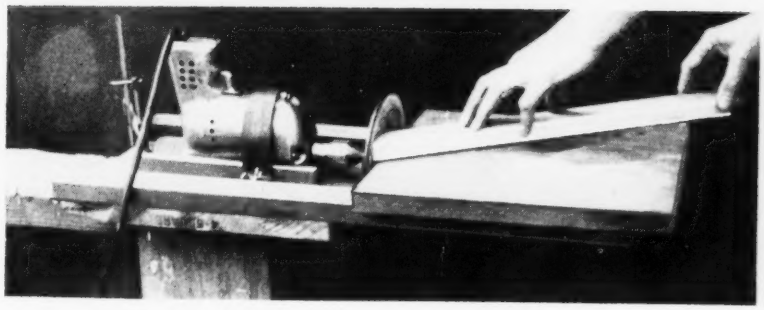
BUILD IT YOURSELF! ENJOY a GARDEN POOL electrically lighted at night! UNDERWATER, GARDEN and PATIO LIGHTS . . . WATER SPOUTING STATUARY . . . PUMPS . . . WIRING . . . Colorful WATERPROOFING for POOLS and HOMES . . . PLANS with complete instructions. Also WESTERN KNOTTY PINE FURNITURE, iron horseshoe lamps, andirons and hardware from high up in the Rockies. ANDRES, 234-C Commonwealth Bldg., Denver 2, Colo.

STORY WITHOUT WORDS

By FRED C. McPHEARSON







The table is very easy to make from plain lumber.

Directions for making

SANDING TABLE ATTACHMENT FOR PORTABLE DRILL

By R. KIELSMEIER

THAT piece of molding you cut just a little too long or at the wrong bevel is sometimes a very aggravating thing to make fit right with the block plane. You are away from your shop and that good sanding disc. Well, don't let it happen again—but fix up this attachment for your portable drill and you always can have a good sanding disc with you.

Many times you can attach the sand paper to the rubber disc that comes with your drill, but if that does not run true enough you can make one like the sketch shows. The paper should be attached to either disc with special disc cement—then it can be removed easily for replacement.

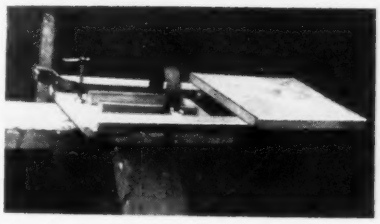
The table on which the drill is to be attached is easy to make from plain lumber. Making and fitting the parts 'D' will vary with different motors and is a cut-and-fit job. Be sure the motor is mounted so that the disc is at right angles with table, horizontally and vertically. Note that a large table is provided on which to lay the piece to be sanded.

In assembling the parts, first lay the parts C C on a table and nail thereto part A, ends and edges flush with one another. Turn the assembly over and nail on part B, dividing equally the ends from parts C C and letting the edge project 1/4" over the ends of parts C C. The holes for the bolts are to be drilled so part E will fit snugly over the motor.

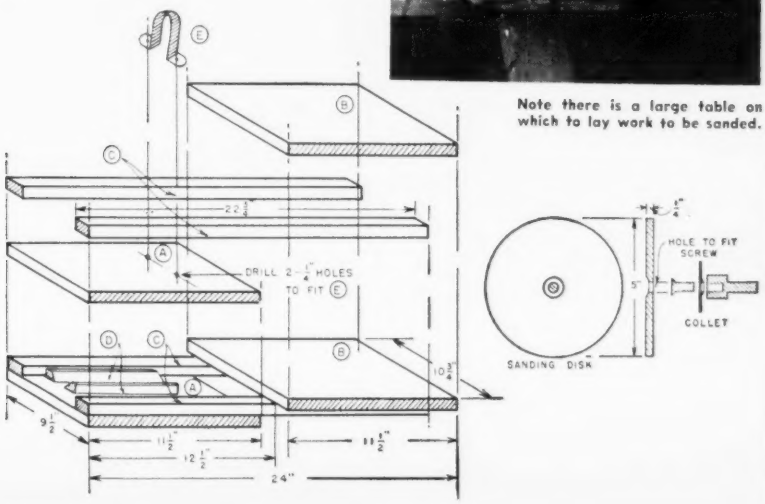
MATERIAL LIST

NET SIZES

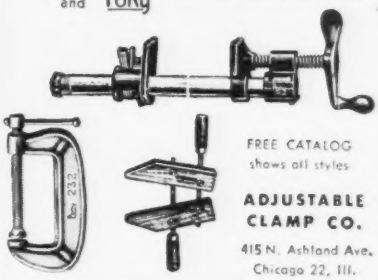
(A) 1—3/4"—11 1/2 x 9 1/2"
(B) 1—3/4"—11 1/2 x 10 3/4"
(C) 2—3/4"—1 3/4 x 22 3/4"
(D) 2—to fit motor used
(E) 1—1/16 x 1 1/4" steel—to fit motor
2—1/4 x 1 1/4" carriage bolts
1—1/4—20 nut
1—1/4—20 wing nut
(F) 1—1/4—5 x 5 plywood
1—collet—1/4" shank



Note there is a large table on which to lay work to be sanded.



"Jorgensen" and "Pony" CLAMPS



FREE CATALOG shows all styles

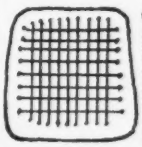
ADJUSTABLE CLAMP CO.
415 N. Ashland Ave.
Chicago 22, Ill.

102 UNUSUAL-NEW JIG SAW PATTERNS

Whether you use your jig saw for pleasure or profit, you will want this smart new set of original full size patterns—up to 21" high—for making comical pulltoys, attractive lawn ornaments, popular house markers, unusual novelties, etc. All 102 full size patterns, with simple easy to follow instructions, are yours for only $1.00 postpaid.
S. LYNDS, PATTERNS, 71-S Park Avenue, Natick, Mass.

KNOCKED DOWN CEDAR CHEST

LUMBER and VENEER
Write for free price list
GILES & KENDALL CO., Huntsville, Alabama



CHAIR CANE
Save your valuable chairs. You-do-it. Genuine strand cane. Machine woven cane webbing for seats with groove. Ash splints. Natural leaf. Fiber rush. Catalogue, samples, cane instructions 35c. Complete seat weaving Book $1.15. BASKET REEDS, Bases, LEARN-HOW BASKET KITS. Complete basketry instructions 65c.
FOGARTY CANER
River Street, Troy, N. Y.

HOLD EVERYTHING!
"FINGER GRIP" CLIPS

are Adjustable!
Protect TOOLS BY "PARKING" them conveniently in View: ...a place for every tool.
AT BETTER HARDWARE and CHAIN STORES
A. I. PLATT CO.
162 Kenwood Ave., Fairfield, Conn.

Use Your Scrapwood
To make extra income from your home workshop by using your jigsaw and our tested and proven money making patterns. As a special introductory offer we will send you 100 full size patterns (your choice), and instructions for finishing and selling for only $1.00 postpaid.
PATTERN SERVICE, Medway 2, Mass.
Our 12th year serving the homecraftsman.

World's Most Useful Hobby Tool!

DREMEL Moto-Jig Saw *Only* $23.50

Pat. Applied for

Powerful Rotary Motor!

BIG CAPACITY!
Cuts 1½" wood, ¾" plywood, metal, plastics! Even cuts 2 x 4's!

SAWS ANY DIRECTION!
4-way blade holder takes any length stock! Table raises and lowers, tilts 45°! You use every tooth in the blade!

ROCKER ACTION!
New principle prevents blade whipping and buckling, reduces breakage! Obsoletes old-style blade tension spring. More power . . . faster cutting speed!

Makes 1001 Valuable Projects!

ENJOY AMERICA'S MOST FASCINATING NEW HOBBY!

The new DREMEL opens the door to a hobby that rewards every member of the family, young and old! It's a tool everyone can enjoy—and operate. Powered by a real ROTARY motor (not a vibrator), the DREMEL is rugged enough for production work, cuts intricate scrolls impossible for other jig saws. There's no limit to the things it can make, from window valances to toys, from cabinets to knicknack shelves. A trial will convince you that dollar-for-dollar, the DREMEL out-performs them all! It's the best power tool investment any family can make!

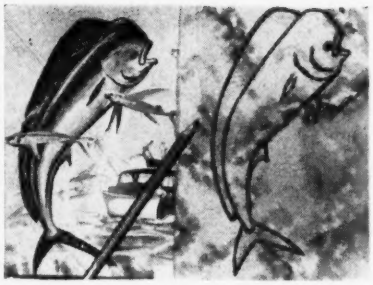
Low-Cost, High Performing DREMEL Electric Coping Saw

A genuine craftsman's tool with dozens of household and workshop uses. Lightweight . . . easy to operate . . . perfect for knicknacks, corner shelves, intricate scroll work. Cuts through ¾" wood, plastics, rubber and asphalt tile, etc. Perfectly safe for children—women love to use it too! Has only two moving parts, never needs oiling. Unique 4-way blade holder permits cutting any direction—no limit to length of stock it can handle.

SEE YOUR FAVORITE DEALER: Dremel Tools are sold at better dealers everywhere. If yours can't supply you, order direct on a five-day trial, money-back guarantee. Remit in full and we will ship postpaid. Or, send only $2. now, pay postman balance plus postage and C.O.D. fee.

Send for free catalog of Dremel power tools

DREMEL MANUFACTURING CO. Dept. 195-C RACINE, WIS.



Design is traced onto linoleum sheet by means of carbon paper. Lines are darkened with pencil. (1)

To save work, the bulk of the linoleum is trimmed off with scissors. Design then is glued to wood block. (2)

Details are carved with sharp knife. Soft linoleum makes carving an easy job. (3)

For printing on paper, linoleum design is inked with photographer's rubber roller. Block then is pressed on paper. (4)

(*Continued from page* 215)

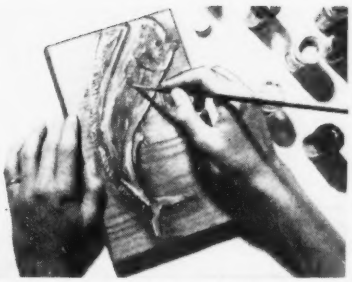
PRINTING: When working with the textile paint it is advisable to lay the material to be printed over the linoleum design and press smooth with your fingers until the design appears on the reverse side of the fabric (Fig. 6). Remove the fabric from the block by lifting it from one end and drawing it upward. You will notice that the colors have arranged themselves in the exact proportions, blending and giving the finished print an etch-like quality. See Fig. 7.

SETTING THE DESIGN: If you have placed the design on a garment, it is to be set in the material so that washing or dry cleaning will have no adverse effect on it. This is done by pressing the garment's designed area with a medium hot iron and a cloth saturated with vinegar. In case you intend framing the design this step is unnecessary.

FRAMING: Paintings made on fabric can be framed by cutting the segment of cloth a few inches larger than the cardboard insert in the frame. These overlapping edges are drawn tightly across the back of the insert so there are no wrinkles on the print side. They may be glued or held in place with straight pins. A sheet of masking paper is attached to the back side to give it a finished look.

CARVING COMPLICATED SCENES: To undertake a large-scale picture, draw or trace your design (actual size) on a large sheet of tracing paper. Draftsmen's supply houses carry it in the bulk. Square it off like a checkerboard and make linoleum blocks the size of each square. The design for each block should correspond to that designated in the square on the pattern. Each block will contain a portion of the original design and should be printed as a mosaic in the same manner as already described. You will find it helpful if you number each square and its corresponding linoleum block.

CARVING MONOGRAMS: When carving monograms or lettering in linoleum, always remember they must be carved so they will read in reverse on



Fabric painting involves completely covering linoleum design with textile paint. Entire design should be wet before printing. (5)

By pressing fabric on painted block, design should appear through reverse side of material before it is removed. (6)

Colored painting is magically transferred onto the fabric and made permanent by ironing with vinegar saturated cloth. (7)

This African Mask is an example of an ink printed design on black paper spattered with gold paint for contrast effect. It sells for $10 at a local gift shop; can be duplicated many times from a single linoleum block engraving.

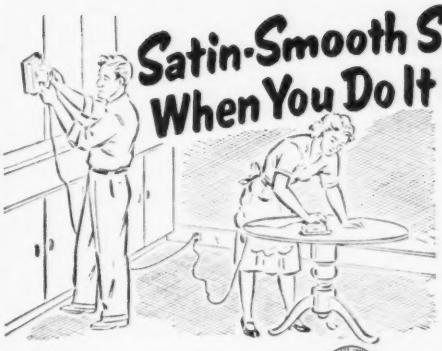
the block. The best way is to trace them as you normally would on thin paper, then turn the paper over and re-trace them in reverse on the linoleum.

MERCHANDISING: Selling the products of your hobby will more than compensate for the cost of your materials and time. Make some professional-looking samples of your work. In other words, if you intend selling your linoleum block pictures, be sure the backs are well covered with heavy brown wrapping paper smoothed and glued to the very edge of the frame. Use screw eyes instead of nails, picture wire instead of string. These final touches often may mean the difference between selling and not selling it.

Armed with samples of your work, your first problem will be to get them displayed in some local gift shop. This should not be difficult since proprietors of these shops will gladly help you when you suggest they handle your work on a consignment basis. This means the proprietor will get 10 or 15 percent of the asking price when the article is sold. Unless you are familiar with the prices you can get, let him make recommendations. He often will set one higher than you would. Be receptive to any suggestions he might offer, since he will know better than you what customers buy.

Once you have made an agreement with one shop, go on to others. Don't neglect the small towns bordering your city. They may prove to be miniature gold mines—especially resort towns.

Sooner or later the profits will start coming in along with requests for more of the same type of items. From then on everything depends on how fast you can meet the demand and on how much time you can devote to the many other ideas that will come to you.



Satin-Smooth Sanding Guaranteed When You Do It With DREMEL!

For Perfect Finishes, Insist on DREMEL "With-The-Grain" Action!

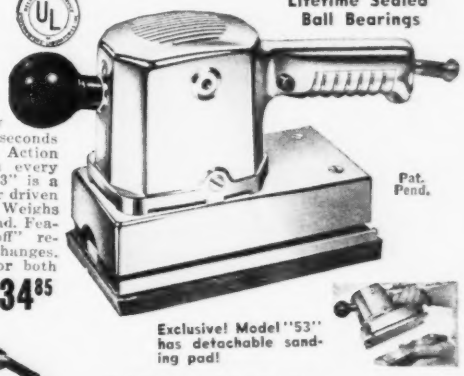
A Simple Test Proves It . . .

Straight-Line Action Is Best!

New Model "53" Sander with Heavy-Duty ROTARY Motor!

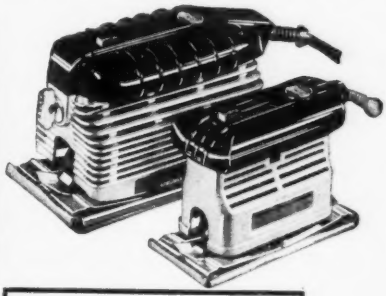
Note the test charts below. They show how you can prove for yourself—in seconds—that only Dremel Straight-Line Action Sanders guarantee a flawless finish every time! The new heavy-duty Model "53" is a real powerhouse, the first rotary motor driven sander to have straight-line action. Weighs only 5¼ lbs. has 24 sq. in. sanding pad. Features the exclusive "easy-on-easy-off" removable pad that simplifies paper changes. Takes a real "bite," can be used for both rough and finish sanding. Complete with 2 detachable pads, 6 abrasive sheets $34.85

Lifetime Sealed Ball Bearings



Pat. Pend.

Exclusive! Model "53" has detachable sanding pad!



Model "2000" Sander-Polisher

Perfect for small shop and home use. Features "Straight-Line Action"; high speed reciprocating motor; 14,400 strokes per minute; wt. 5 lbs.; 21 sq. in. sanding surface. Price including steel carrying case, polish pad, 25 asst'd abrasives $24.50

Model "A" Sander-Polisher-Massager

Three tools in one! "Straight-Line Action"; high speed reciprocating motor. Wt. 2½ lbs.; 12 sq. in. sanding surface. Complete with polish pad, massage pad, 6 abrasives $14.85

Try This Test! Prove That Dremel STRAIGHT LINE ACTION is Superior to All Other Sanding Methods!

TRY THIS SIMPLE TEST: Sand a piece of wood by hand, using the four motions below. Note that the slightest cross-grain action produces scratches and orbital swirl marks. Only Dremel with-the-grain action gives scratch-free, satin-smooth finish. This test proves conclusively why professional craftsmen always sand with-the-grain—never cross-grain.

ELECTRIC DREMEL POWER TOOLS TM

SEE YOUR DEALER. If he cannot supply, order direct on 5-day trial, money-back guarantee. Remit in full for postpaid shipment; or send $2, pay postman balance plus postage and COD FEE.

DREMEL MFG. CO. Dept. 195-C Racine, Wisconsin

FULL SIZE PLANS NOW ONLY 25c!

ANY FIVE FOR $1.00

Musical Cake Plate

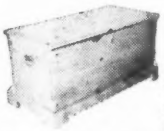
A notable novelty for home and family entertainment. Exceptionally adapted to Christmas, birthday and other holiday meals-parties. Complete description with photos and drawings appears on page 22 of September-October issue.

FULL SIZE PLAN No. MCP- . . . 25c

Colonial Beverage and Snack Server

A Colonial item of traditional design but with a modern twist—carrying a take-out tray with receptacles for pitcher and six glasses. Also has compartments for silverware, snacks, etc. For full details see page 266 of May-June issue.

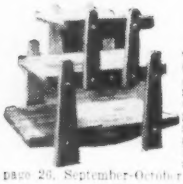
FULL SIZE PLAN No. SBS-5 . . . 25c



Colonial Dowry Chest

A traditional piece characteristic of Colonial furnishings. Its lines represent the best in design of the day. Serves many purposes besides being very decorative. Can be made of pine, birch, cherry, oak, fir, beech—any of the home grown woods. For complete description and additional illustrations see pages 352 and 353, July-August 1952 issue of this magazine.

FULL SIZE PLAN No. CDC-1 . . . 25c



Triple Decker Magazine Table

This three-tier magazine table, server, snack table, plant stand—table of many uses—favors the Colonial. Any convenient wood and finish will prove suitable. Its simple, sturdy construction makes it a popular furniture project. For additional illustrations and detailed description see page 26, September-October 1953 issue of this magazine.

FULL SIZE PLAN No. TDT-2 . . . 25c

Combination Smoking Stand & Magazine Rack

An original design, ideal for living room or den. Maple or other hardwood of similar texture recommended. Complete description, with eight photographs and detail drawings, appear on pages 88 and 89 of the November-December 1953 issue of Homecraft & The Home Owner.

FULL SIZE PLAN No. SSM-4 . . . 25c

Reproduction of Early Milking Stool

Our forefathers used it in the milk-shed. Now you will find it used as a TV seat, foot stool, plant stand, fireside bench—or any one of a possible half dozen other purposes. A furniture piece of pine charm as well as utility. For additional details and photos see page 14, of the January-February 1954 issue of this magazine.

FULL SIZE PLAN No. MS-3 . . . 25c

Order by Number

Plans Dept., Homecraft & The Home Owner
154 E. Erie St., Chicago 11, Ill.

HOME OWNERS' *Shopping Column*

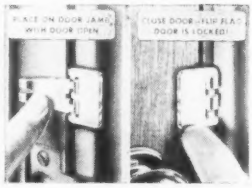
Do-It-Yourself Iron Tables

These new do-it-yourself tables come in 5 styles: dining, dinette, console, coffee, occasional. Of classic wrought iron design and finished in rich, matte black to blend with modern and traditional decor. Screwdriver is all that is needed for assembly. Buyer has choice of plywood, Formica, frosted or plate glass for the top. Dinette size retails for $39.95, plus material for the top. For complete information write to: Belson Manufacturing Co., North Aurora 8, Ill.

Railing And Post Lights

"RaiLite" is a new type of lighting unit for interior or exterior use. Used as a structural part of railings or fences and provides a means of lighting steps, walks, patios, etc. The railing light may be incorporated into any design or type of wrought iron, steel or aluminum railing. Light source is a standard incandescent 40 to 75 watt tubular lamp. Introduced by PostLite, Inc., Indiana and Illinois St., Des Moines, Iowa.

Quick-Attach Door Lock



Quick Secure Door Lock can be instantly attached, permanently or temporarily, to any inward opening door. No screws, no drilling or mortising, no tools needed. Utilizes leverage for its tremendous strength; the greater the force on the outside of the door, the tighter it grips. Fits outside entrance doors, interior doors, and inward opening windows. Can be carried in pocket or purse for use in motels and hotels. Price $1.00. G. L. C. White Co., Inc., 1593 Crossroads, Los Angeles 28, Calif.

New Power Garden Tool

New attachment for any popular ¼" electric drill is the Electro-Hoe, introduced recently by the W. R. Brown Corporation, 2701 N. Normandy Ave., Chicago. Six rotary tiller blades of tempered spring steel break up the soil quickly and effortlessly for various gardening purposes. Powerful gear reduction gives strong churning action. Handle is interchangeable for right or left-handed gardeners. Retails for $22.50.

(Continued from page 218)

and paints and a bridle, reins and other accessories then are added to complete the job. He estimates that it takes 50 to 60 hours to complete a horse—with a lot of time being spent to etch out the delicate muscles, manes and hooves.

The St. Paul man works in his well-equipped basement workshop where he has pictures of many famous horses to inspire his carvings. To insure accuracy, he frequently checks his models with horse specialists at the University of Minnesota.

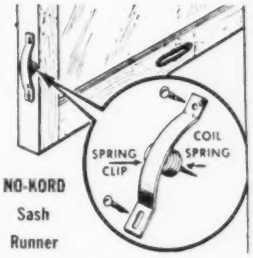
Although he specializes in Belgian, Percheron and Clydesdale horses "because they display so much power," Ganas occasionally turns his hand to other horse projects for variety. At the present time, he is working with a rig of metal horses which he plans to attach to a large, rural-type mailbox. When he completes the job, the rig will become a realistic covered wagon, similar to the type that rolled across the Great Plains many years ago.

Six and a half inches high and sawed to scale. A Ganas horse requires about 50 hours to make.

HOME OWNERS' *Shopping Column*

Sash Runners Eliminate Cords

With No-Kord Sash Runners, window rattling, as well as cords and weights, can be eliminated. Easy to install and fit all windows, new or old. Each set contains four metal runners and springs, enough for one window unit. The metal runners with the tension springs are fastened two to each half of the window, according to the easy-to-follow directions included with each set. Price 75c per set; 3 sets for $2. Albert Fast, Dept. B79, 33 Beach St., Hillsdale, N.J.



NO-KORD Sash Runner

Accordion Door Room Divider

Used as a room divider, the new Hufcor folding door provides privacy as well as an effective sound barrier. When not needed, it folds compactly to one side, saving all wall and floor space. Door covers for the Hufcor door are of 5-ply, laminated construction. Outer ply is washable, sun-fast vinyl fabric which will not chip, peel or crack. Covers are interchangeable, simplifying changes in color. More information from The Hough Shade Corp., Janesville, Wisc.

Workshop On A Door

Dor-Bac home workshop fits on the back of a door and folds into storage position as an inconspicuous, compact cabinet 18 x 40 x 7". To have complete workshop convenience, just open cabinet door. It drops down to form an 18 x 40 x 1" plywood hardboard workbench top set in sturdy L-channel frame. Adjustable bench height steel legs. Interior has perforated back for mounting tools; gooseneck lamp can be positioned conveniently. Price $39.50. Dor-Bac Corp., Board of Trade Bldg., Chicago, Ill.

Window Control Repairs Ailing Sash

Here's a quick, permanent repair for single and double-hung windows that rattle or have broken sash cords. Raise the lower sash and slip in a stainless steel Quiki Window Control at the highest point possible between the jamb and sash. It's self-anchoring, the prongs imbed in the jamb. Lower the upper sash and slip in another Quiki in the same manner. Quikis are 25c a pair for 1¼" regular width or 1" width at hardware and lumber dealers. Manufactured by Ideal Brass Works, Inc.

Bargain Kits, Special Offers

Over 200 Jig Saw and Inlay kits from $1.50 up.

No. 78 CATALOG
Contains over 350 fine illustrations
Exclusive Workshop Tools
150 Different Kinds of wood
50c

WOOD AND VENEERS

We have just republished 4 catalogs (Parts 1, 2, 3, 4) of Old Fashioned Jig Saw Patterns, consisting of hundreds of decorative and useful articles that can be made with a jig saw. Catalogs are 16 pages each and will be sent for 70c per set of 4.

JIG SAW PATTERNS

Jig Saw Patterns for lawn ornaments—ash tray stands—garden circus—corner brackets—order portfolio No. 65 for 35 cents.

GARDEN CIRCUS

Hundreds of patterns of life-like figures of children, birds, dogs, and cats, also comical figures of cops, gnomes, elves in all imaginable poses and sizes. Many patterns of ash tray stands, pretzel stands, children's furniture and corner brackets. These patterns illustrated in our 30-page portfolio No. 65. Send 35c.

MASTER WOOD WORK

Catalog No. 78 lists and prices all domestic and foreign woods, veneers, special tools, etc. Catalog 50c. No Postage Stamps.

Send $1.50 for all catalogs and portfolios listed here.

H. L. WILD Dept. P.H. 510 E. 11th St., New York City 9
(Open Sat. until 3 P.M.—Phone CAnal 8-2345)

When planning to repaint or re-enamel old wood, make sure it is clean, free of wax and grease. It should be sufficiently smooth that no rough spots will show through the final finish.

Alcohol stains and rings can be removed from fine furniture without refinishing the entire piece. Moisten your finger with mineral oil, dip in table salt and rub gently until stain disappears.

Handle any finishing job with these Fil-Mar
DRUM SANDER KITS

Two Complete Tool Kits

JR-1

JR-33 Both for $7.50

JR-1 15 Pc. Drum Sander Kit gives you 5 sizes in expanding type drums from 1/2" to 2" diam. All fit any 1/4" or larger chuck on hand drills, flexible shafts, drill presses. 10 sanding sleeves, 1 fine and 1 coarse for every drum. For sanding or grinding wood, metal, plastics, stone. $3.95

JR-33 3-in-1 Kit has heavy-duty 3" Diam. drum that separates into 3 equal parts to be used all together or one or two parts at a time. Fits any drill press, electric motor or flexible shaft with 1/2" chuck or larger. 3 sanding sleeves with graduated grits included. Drums air cooled for 25% longer sleeve life. $3.95

Money-Back Guarantee! 10 Day Free Trial!
Postpaid if check or cash accompanies order

Bob's Tool House Department 14 1259 E. Market St. Akron 5, Ohio

$10 JIG SAW Patterns

HAVE FUN—MAKE MONEY selling these amazing NEW UNUSUAL Novelties, Gifts, Lawn Figures, Animals, Bar Implements, Door Markers, Plaques, Wall Shelves, etc. Easy. Trace, saw out and paint. $1 brings you these EXCITING and DIFFERENT $10 full size JIG patterns. ORDER NOW!

TRANS PLANS, Dept. O-7
35-22 191 St., Flushing, N. Y.

Free Book on Arthritis And Rheumatism

HOW TO AVOID CRIPPLING DEFORMITIES

An amazing newly enlarged 44-page book entitled "Rheumatism" will be sent free to anyone who will write for it.

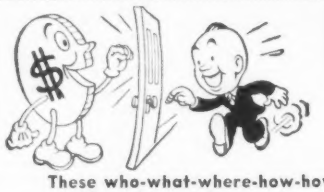
It reveals why drugs and medicines give only temporary relief and fail to remove the causes of the trouble; explains a specialized non-surgical, non-medical treatment which has proven successful for the past 36 years.

You incur no obligation in sending for this instructive book. It may be the means of saving you years of untold misery. Write today to The Ball Clinic, Dept. 523, Excelsior Springs, Missouri.

The earliest record of the use of lacquer dates back two thousand years. The Chinese and Japanese were known to have used it quite commonly. In 3992 B.C. the Imperial Japanese established an office of "Chief of Imperial Lacquer Department". The establishment of the office indicates lacquer was used long before that time.

Colorful wallpaper covered with a coat of shellac or lacquer, will give new life to an old table top. Glue the paper to the top of the table and give it a protective coating of lacquer.

Had trouble getting paint to stick to copper???? Maybe you burnished it too much. Let it dull and tarnish, wipe away the dirt, and paint with a zinc-less paint. It will bond well then.



HOMECRAFT'S MARKET PLACE

of special interest to workshoppers and do-it-yourselfers

These who-what-where-how-how much columns are the meeting place of those who want to buy, sell, trade—at low cost. Advertisements here cost only 20c per word, with a minimum of 15 words. Count each initial as one word. Name and address must be included in the count. Be sure to indicate under what heading your advertisement is to appear. Copy for the May-June issue should be sent with remittance before March 18. Send to Classified Advertising Dept., Homecraft Magazine, 154 East Erie St., Chicago 11, Ill. These ads will give you action!

ADVERTISING AGENCIES

FREE: 1955 Advertisers Rate & Data Directory, 52 pages. E. H. Brown Advertising Agency, 20 N. Wacker, Chicago 6.

AGENTS, SALESMEN—WANTED

WHOLESALE: 8,000 nationally famous products. 30-80% discounts. Large catalog. Sensational business plans included. Consolidated Distributors, 21-65 Lafayette, Paterson 15, New Jersey.

BEAUTIFUL FEATHER pictures. Sell on sight. 200% profit. Free sample. Sylvith, Apartado 9036, Mexico 1, D.F.

SHINE CARS without "polish." New invention. Lightning seller. Cars gleam like mirror. Samples sent on trial. Kristee 69, Akron, Ohio.

BUY WHOLESALE direct from us, 25,000 items; catalog 25c. (Refundable). Matthews, 1472-F6, Broadway, N.Y.C. 36.

RUN A spare-time greeting card and gift shop at home. Show friends samples of our new 1955 all-occasion greeting cards and gifts. Take their orders and earn up to 100% profit. No experience necessary. Costs nothing to try. Write today for samples on approval. Regal Greetings, Dept. 157, Ferndale, Michigan.

A DRESS shop in your home. No investment. Liberal sales commissions. Write Bellecraft Fashions, 111 NK Eighth Ave., New York.

PERMANENT KEY registration. Brass keytag; steel keyring. Guaranteed. All for $1.00. Agents wanted. Key Safety, 4008-A, Denver 9, Colorado

FREE BOX of all occasion greeting cards just for sending your name and address. Permit us to tell how you too can make big money during your spare time showing friends, neighbors Elmira's sparkling line of all occasion greeting cards. No obligation to buy. To receive your gift box with details and samples on approval, send post card today to Elmira Greeting Card Co., Dept. 151, Elmira, N. Y.

BUY WHOLESALE: Appliances watches. Operate profitable business. Catalog 25c. (Refundable). Carleton's, 3007 Wharton, Philadelphia 46, Penna.

STRANGE "DRY" window cleaner. Sells like wild. Replaces messy rags, liquids. Simply glide over glass. Samples sent on trial. Kristee 69, Akron, Ohio.

PLEASURABLE part-time profits with imported handcrafts, stationery, perfume, etc. Free catalog and wholesale price list. Kenneth Bowa, Box 618, Springfield, Mass.

A DRESS lingerie shop in your home. Sell Fifth Avenue, New York fashions from gorgeous style cards. No investment. Good commission. Write Modern Manner, Dept. 8042, Hanover, Penna.

QUALITY TIES. Your profit, 180%. Catalog free. Loren Specialties, 4351-PH-3 Ebonney, Chicago 24.

MAKE EASY MONEY. Sell famous $3 CO-2 fire extinguisher. Wholesale or direct. Fast sales, liberal profits. Fire Killer Mfg. Co., Dept. P, 115 W. 13th Street, Hazleton, Penna.

WHOLESALE CATALOG nationally advertised appliances, cameras, watches, jewelry, etc. Send today for free information. Carroll Distributors, Dept. -H, 4421 Snyder Avenue, Brooklyn 2, New York.

ANIMALS—ANIMAL RAISING—EARTHWORMS

1,000 BRED MINK booklet pen plans 20c. Lake Ontario Mink Ranch, Gravel Road, Webster, N. Y.

CHINCHILLAS: BIG profits. Free literature. Tom McGowan, 170 Horton Ave., Valley Stream, L.I., New York.

EARTHWORMS—profitable. Amazing future. Start in garage or basement with my complete "starting units". Illustrated circular with raising instructions 25c. Refundable. Multiple Cabin Services, Division-E, Kalkaska, Mich.

300 DOMESTICATED earthworm eggs (hatch 1,200) $2. Advance instructions sent! Detailed book 10c. Averee, 112-S Elizabeth, Wichita 13, Kansas.

BOOKS—CATALOGS—MAGAZINES—LISTS

NATIONAL GEOGRAPHIC magazines 1888-1954. Any issue. Send wants. Periodical Service, Box 465-CR, Wilmington, Delaware.

A MUST for all hobbyists. Only $1.00 for 1550 sources of supply, 300 categories. Valuable coupon, order now from Hobby Homecraft Directory, Sidney 9, Ohio.

GERMAN Address lists. Anything manufactured 50c. 800-page export directory now available. Burke Associates, Manchester, Mass.

U.S. CONSTRUCTION jobs. Top pay. Latest complete authentic list. Send $1.00. Money-back guarantee. Dempster's Construction Scout News, Bridgeport 77, Ill.

TRAILER MANUAL. Over 200 pages, 250 pictures. Tells how to: buy, tow, travel, build, live-in, repair. $1.98. Trail-R-Club of America, Dept. HC-3, Box 1376, Beverly Hills, California.

BUILD IT YOURSELF

BUILD YOUR own power tools. Save 90%. Catalog of 100 plans 25c. Robert Fellows, Caledonia 5, N.Y.

FURNITURE, WROUGHT iron legs and frames. You assemble. Free catalogue. Phillips Furniture, East Peoria 1, Illinois.

AWNINGS, COOL, ventilated, aluminum, wood frame. Materials average window, $5. $250.00 weekly making these beautiful awnings. Plans $1.00. Coolshade Awnings, 125 Broad, Pawtucket, Rhode Island.

55 NEW tin-can projects. Details illustrated. $1.50 postpaid. Satisfaction guaranteed. Dilworth, Dept. 26-B, Monkton, Maryland.

USE auto starter and battery. Convert child's car to electric. Plans $2.00. Weldomatic, 271 Douglas Pike, Smithfield, R.I.

TELEVISION snack tables and rack—free information on ready-to-assemble kits. Television, 280 Kingsley Ave., Staten Island 14, N.Y.

ELECTRO-PEN, burns name or any identification on tools or any metal. Operates on 6 to 15 volts, AC-DC. Make it yourself from easily understood instruction plans. Send $1.25. Remle, 2946 Tyburn, Los Angeles 39, Calif.

HEATING do-it-yourself. Heat loss installation plan specifications furnace provided. Save 50%. Tomco, 3415 McClain Dr., Cedar Falls, Iowa.

BUILD streamlined plywood kitchen cabinets. Plans, photos, instructions, $1.00. Playnecabinets, 4617 Johnson Avenue, Western Springs, Illinois.

DO-IT-YOURSELF. Build a power mower with Handy-Dandy conversion kit. $19.50 prepaid in U.S.A. Fits 16" to 20" mower. LeClaire Mfg. Co., LeClaire, P.M., Iowa.

BUILD your own power lawn mowers. Free literature. Klingsick Machine Shop, Kingfisher, Okla.

BUILD own jet helicopter. One man. Plans $6.00. Rovin Engineering Company, 800g University Ave., Ithaca, New York.

BUSINESS OPPORTUNITIES

COMPILE FRESH new mailing lists. Big demand. Circular free. Bowman, 7119 Clyde Ave., Chicago 49, Ill.

QUICK CASH—$1.00 profit selling $2.95 photo enlargement deal. Allen Studio, Riegler Bldg., Little Rock, Ark.

$35 WEEKLY addressing envelopes for advertisers. Instructions, $1 refundable. Adservice, Spring Valley 10, New York.

NEWEST SPARE, full-time home business. $5 to $10 hour possible. Paint with Suede—the finish with touch and eye appeal. Beautify auto dashboards, signs, radios, toys, figurines, lamps—1001 others. Complete, Step-By-Step instructions sent for no-risk examination. Free details. Coast, Los Angeles 61.

START A spare time home business. Make extra money. Experience unnecessary. Literature free. Ellmar 186, Muncy, Pa.

EARN $15,000-$30,000 annually. Franchise protected. Guaranteed minimum $12,500 or money back. Live at home. No merchandise to buy. Self employed. One of the most exclusive and noncompetitive businesses in United States. Send 50c for explanatory book. Money refunded when book returned. Harrell & Co., Box A-11, Louisville, Illinois.

IMPORT-EXPORT. Opportunity profitable, world-wide, mail-order business from home, without capital, or travel abroad. Established World Trader ships instructions for no-risk examination. Experience unnecessary. Free details. Mellinger, E511, Los Angeles 24, Calif.

FREE BOOK "505 Odd Successful Businesses". Work home. Expect something "odd." Pacific AA, Oceanside, California.

EARTHWORM BREEDING: Bait. Soil. Easy. Profitable. Get unusual story "An Earthworm Turned His Life." Send dime. Earthmaster System, Dept. 6-G, El Monte, Calif.

MONEY IN new grease-less doughnuts. Start in kitchen. No smoke. Sell stores. Free recipes. Otto Ray Co., 3603 South 15th Ave., Minneapolis 7, Minn.

INCOME FROM local information. No selling. Interesting sparetime. Write Neherco, La Verne 3, California.

MEN WANTED—Build luggage and cases at home. We sell your products—supply complete instructions, materials, everything. No special equipment needed. Free details. Casecraft, 805-A4 Sunset, Los Angeles 12, Calif.

MAKE MONEY clipping wanted items from your newspaper for publishers. Some worth up to $10.00 each. Write for information. Newscraft Publishers, PHC-983-E Main, Columbus 5, Ohio.

START A business of your own. No investment, no experience. Make $100 week without effort. Send for FREE opportunity book. H. Cohon & Sons, Inc., Dept. G33, 1069 Utica Avenue, Brooklyn, N.Y.

TO $40.00 weekly: Sparetime home operated mailorder business. Successful "beginner's" plan. Everything supplied. Lynn 10420-HC National, Los Angeles 34, California.

HUNDREDS MONEYMAKING opportunities. World's biggest classified. Free copy. Popular Mechanics Classified, 200-HH East Ontario, Chicago 11.

BRONZE BABY shoes. Instructions, equipment and mountings for genuine electroplating process. Free catalog. Hollywood Bronze Supply, Dept. B-11, 1624 East First Street, Los Angeles 33, Calif.

CAN YOU earn $40 weekly addressing display folders? Enclose stamped addressed envelope; Write Allen Co., Warsaw, Indiana.

MAKE EXTRA money. Address, mail postcards. Spare time every week. Write Box 14, Belmont, Mass.

$4,000.00 PROFIT in two months. No investment. Details 50c. Charles Company, 12-CEZ, Norwood, Ohio.

GUARANTEED HOMEWORK. Immediate commissions. Everything furnished. Hirsch, 1391-2 Hoe, Bronx 59, New York.

TIN-CANS: TURN them into cash. Nine methods. Instructions 50c. Charles Company, 12-CEV, Norwood, Ohio.

$500.00 MONTHLY mailing postcards. Instructions $1.00. $90.00 weekly addressing envelopes. Instructions 50c. Adele's, 729 Marshall, Rochester 11, N. Y.

EARN MONEY at home: "Timely Tips" tell how. Sample, 25c includes 301 Profitable businesses. Cutler Publishing, Reading, Penna.

NEWSPAPERS: TURN them into cash. Eighteen methods. Instructions 50c. Charles Company, 12-CEW, Norwood, Ohio.

SAWDUST: TURN it into cash. Twenty methods. Instructions 50c. Charles Company, 12-CET, Norwood, Ohio.

FREE FOLIO "$5,000 to $45,000: Vacations Unlimited." Work home, sparetime! No merchandise, equipment. 100 other homework businesses! Haylings-H7, Carlsbad, Calif.

FINANCIAL INDEPENDENCE. Operate profitable home mail order business. Free details. Meder, 550-W Fifth Avenue, New York 36, N. Y.

LIQUID MARBLE. Colorful, glossy. Molded, brushed, sprayed. Cast novelties, statuary, colored tiles. Flexible molds. Composition floors. Particulars free. Marbleized Service, Edwardsville, Illinois.

WANT UP to $100.00 weekly deposited in your mail box? Details free. Aldensmith, Dept. HT, 2705 Ladera, San Bernardino, Calif.

CHINCHILLAS YOU raise them. We buy them. Small capital can show terrific profits at home in your spare time. Free booklet explains our new lease plan. Box 97, Little Neck, New York.

SILK SCREEN novelties. Ideal home workshop business. Will sell very reasonable. Hillside Studios, 2220 W. Walnut St., Milwaukee, Wisconsin.

WE PAY cash for home work. No selling. Details free. Wilco, Box 8022, Nashville 7, Tenn.

SPARETIME FIXIT shop at home brings $100 monthly. Customers repeat. Experience unnecessary. No selling. Free booklet explains. Gene Foley Company, Columbia Heights, Minnesota.

INVISIBLE REWEAVING. Now anyone, men or women, can learn this highly profitable trade. All the secrets revealed. A step by step course prepared by one of the nations biggest reweaving concerns. Satisfaction guaranteed. Send for free details about our weave-it-kit. Nu-Weave Products Corp., Dept. H-12, Box 367, Rockville Centre, N.Y.

SAVE 20% to 50%. Buy wholesale. Nationally advertised merchandise. Free details. Beecher Sales, Box 2161-H, Cincinnati 1, Ohio.

OUR BOOK "Home Factory" tells how to make and sell 101 products used daily. Tells where to buy materials Wholesale. 50c. Ken-West Distributors, 7-N South Harlem St., Worcester 4, Mass.

MAKE MONEY at home doing easy, pleasant work. Everything furnished. Good earnings. Write: Richl Enterprises, 111 Peninsula Blvd., Valley Stream 2, New York.

$200 WEEKLY cleaning Venetian blinds. Profitable home business. Free—revealing book. Burtt, 2434X, Wichita 13, Kansas.

OWN, operate Route—"Wishing Wells." Place these new $8.50 skill games on counters in cafes, luncheonettes, clubs, etc. Collect coins weekly. Write, "Legalshire", Box 929, Long Beach 1, California.

NEW 1955 catalog nationally advertised merchandise. Rush $1.00 for catalog to Edward Clemens, 318 West Bridge St., Morrisville, Pa. (Refundable).

ELECTRIC SUPPLIES

LAMPS: 25c brings bargain catalog showing all parts for repairing, building. Contains instructions for electrifying vases, oil lamps, etc. Gyro Lamps, 5402U Clark, Chicago 40.

ELECTROPLATING EQUIPMENT, anodes and solutions for all types of plating. Instructions. Assemble your own plater and save. Free catalog. Ramyr, Dept. E-12, 1624 East First Street, Los Angeles 33, Calif.

HOMECRAFTERS' SUPPLIES—EQUIPMENT

SILK SCREEN decorating. Simplified technique. Illustrated directions, supply list 25c.

CRAFTSMAN SUPPLY catalog, illustrating Swiss musical movements, Glamorwood music box kits, wheels for toys, Suede-Tex, Wrinkle-Tex, Krystal-Tex finishing materials. Patterns and other supplies. Catalog 50c (refunded).

PATTERNS for woodworkers. Over 800 antique and modern projects that will start you in profitable business. 1955 catalog 25c. Walters Hobby Shop, 207 French Road, Utica 4-PH, New York.

COPPER TOOLING starter kit. Contents: Two 6" x 8" copper sheets, 4 designs, maple tool, instruction booklet, $1.00 postpaid. Complete tooling supply catalog, 25c. Free with kit. Groundmaster Company, Div. E., Boulder, Colorado.

FREE INFORMATION, money-making full size patterns. Professional designs. Furniture, gift shop items. Write Jigsawers, 117 Worth, New York 13.

CRAFT CATALOG. A helpful buying guide for leathers, plastics, metals, all hobbycraft materials, tools, kits; a volume of ideas and instructions. Illustrated! Send 10c. Sto-Rex Crafts, Dept. 3, 143 9th St., San Francisco, Calif.

WOODWORKING COURSE for home craftsmen. Twenty-two manuals. Over 1,000 pages. 75 training projects. Only complete home training program available today. Carefully written, profusely illustrated. Covers everything from wood selection to final finishing. Complete instruction in care and use of all hand and power tools. Prepared by expert manual training instructors. Write for free booklet. Interstate Training Service, Dept. G-35C, Portland 13, Oregon.

BEAUTIFUL GOURD birdhouses, wren size $2.00 each, 2 for $3.50. Larger for Bluebirds etc., $3.00 each, 2 for $5.50. Postpaid. Kuperkraft, Chelsea, Iowa.

COLLECTORS—TEN western woods $2.00; miniature shingles 35c; myrtlewood earrings, $1.75. T. Binford, Oceanlake, Oregon.

FREE MAKE-it-yourself craft catalog, low-cost kits and supplies. American Handicrafts, Box 1479-AJ, Fort Worth, Texas

16 NEW lawn chairs, 22 picnic tables, benches, trellises, etc. All 38 plans with necessary full size patterns, $1.00 Mastercraft, 33H, 7041 Olcott, Chicago 31, Ill.

NORTHLAND naturecraft cone kit. One hundred evergreen cones, plus birchbark and lycopodium. Make beautiful novelties. Postpaid, two dollars, check or money order please. Mattox Products, Gheen, Minn.

PETER PAN. Snow White, Seven Dwarfs, Cinderella, Red Riding Hood, etc. Eighteen full size patterns 16" to 24" high. All for $1.00. Mastercraft, 37H, 7041 Olcott, Chicago 31, Illinois.

SELL "Little Stinker" (Skunk) pins. Handmade of tropical seashells. Sample 50c. Details free. James Meyd, 8429HC Willow Oak Road, Baltimore, Maryland.

TESTED CERAMIC supplies, finest copper enameling supplies. Fabulous glazes, clays, kilns, books. Studio discounts. Copper enameling kits, preformed copper shapes, copper findings, kilns, enamels, everything! Catalogues 25c. Sunkroft's, Dept. HC, Panama City, Florida.

IT'S HERE! It's New! It's Complete! Newest flower making instruction books consisting of five volumes price $1.00 each. Vol. 1 A to M. Vol. 2 N to Z. Hand made flowers. Vol. 3 Magic flower Maker instructions. Vol. 4 Crepe paper, Fibertex & Velvatex. Vol. 5 Chenille, and flower arrangement. Send this ad & $4.00 to receive the 5 Volumes postpaid. Douglas Fiber & Flower Supply Co., 1021 Favette Street, Indianapolis, Ind.

SWISS musical movements $2.50. Special melodies to order. Rocking chair movements $3.25. Spielman, 151 West 42nd, New York 36.

INDIAN RELICS

6 FINE ancient Indian arrowheads $2.00. Thunderbird flint $2.00. Clay pipe $4.00. List free. Lear's, Glenwood, Arkansas.

INVENTORS—PATENTS

INVENTIONS WANTED. Patented; unpatented. Tremendous manufacturers lists. Global Marketing Service, 1404 Mitchell, Oakland 1, California.

INVENTORS: SEND for free patent information book and inventor's record. Registered Patent Attorney, Associate Examiner, Patent Office 1922-29; Patent Attorney & Advisor, Navy Department 1930-47. Gustave Miller, 14HO Warner Building, Washington 4, D. C.

INVENTORS: WHEN you are satisfied that you have invented something of value write me, without obligation, for information as to what steps you should take to secure a patent. Write Patrick D. Beavers, Registered Patent Atty., 1080 Columbian Bldg., Washington 1, D.C.

INVENTORS: INFORMATION on patent procedure furnished on request, without obligation. John Randolph, Registered Patent Attorney, 247 Columbian Bldg., Washington 1, D.C.

JEWELRY—OLD GOLD—WATCH REPAIRING

COSTUME JEWELRY supplies. Samples and illustrated catalog, 35c. Largest line in America. Milady-Fair Co., G.P.O. Box 1328, New York City 1.

HIGHEST PRICES for gold, silver, platinum, diamonds, watches, gold teeth. Satisfaction assured. Goods returned if offer unsatisfactory. United Smelting Works, (Old Reliable) 6-M East Monroe, Chicago 3, Ill.

REPAIR WATCHES, clocks at home. Permanent profitable business, easily learned. Electric clock repair course, 25c. John H. Roach, 407 Chester, Newark, Ohio.

LEATHERCRAFT

FREE "DO-IT-YOURSELF" leathercraft catalog. Tandy Leather Company, Box 791-S7, Fort Worth, Texas.

LEATHERCRAFT, METAL tooling, textile painting, beadcraft, shellcraft . . . many other crafts. Fun, easy, profitable. Free, big illustrated catalog. Write today. Kit Kraft, Dept. F23, Box 1086, Studio City, Calif.

STYLECRAFT SURE-fire kits. "Pre-traced" leather kits. Handbags billfolds, filigree belts, over fifty other projects. Patterns on leather. Why trace? Just carve, assemble and lace. Large assortment "precarved" kits also available. Send 25c for catalog, free folder. Refunded first order. Apache Leather Company, 2804 E. Washington St., Phoenix, Arizona.

MACHINERY—TOOLS—SUPPLIES

SHEBEL UNIVERSAL saw filer files all saws. Circular. A. P. Shebel, 730 S. 2nd St., Milwaukee 4, Wisc.

DEPTH GAUGE clamps to frame of ¼" electric drill, with wing nut. Suitable for any bit. $2.50 postpaid. Satisfaction or money back. Harvey Seiders, Halifax, Penna.

BUY SURPLUS power tools, machinery, trucks, jeeps, boats, etc., from US Government. Surplus list $1.00. Homecraft, Box 169, East Hartford 8, Conn.

REBUILT 1 to 3 hp engines $9.00 up for lawnmowers, etc. Cauffiel Motors, Temperance 8, Michigan.

RIPPING narrow boards on your circular saw? Protect fingers and hand with a special designed push stick. 3 for $1 postpaid. Order yours today. Cattline, P.O. Box 9197 N, Richmond 27, Virginia.

SPECIAL TOOLS for woodworking machines. Free lists. Dixieng, 7301-H N. W. 10th Ave., Miami 38, Fla.

WEED CUTTER: New invention. Finest swinging weed cutter made. Heavy balanced blade resists turning. $3.50 postpaid. Satisfaction or money back. Balanced Tools, Box 46-A, Washington 4, D.C.

MISCELLANEOUS

YOU CAN entertain with Trick Chalk Talk Stunts. Catalog 10c. Cartoonist Jack Balda, Oshkosh, Wisc.

NEW TOWELS: Large size, assorted colors. Money-back guarantee. 12 for $1. Order now. Murray Hill House, 204-HC East 32nd Street, New York.

AMAZING NEW Zoysia Japonica lawn seed mixture. Heat, drought resistant. Green spring until winter. $1.00 test packet. Plants 50 sq. ft. Dougherty, 4643 Baltimore 12, Maryland.

BARTENDERS' GUIDE, 200 recipes for home made wines, beers, liquors, plus how to mix drinks, etc. Only $1.00. Pacific Products, Dept. H, Box 514, Coquille, Oregon.

GARMENT BAGS. Giant size (58" x 48"). Heavy-weight plastic, 100% moth and vermin proof. New. Not seconds. Money back guarantee, 3 for $1.00. Order now. Handicraft Mills, 304-HC East 32nd Street, New York.

BEAUTIFUL oil-colored enlargements, 4 x 6 75c; 5 x 7 $1.05; 8 x 10 $1.50. Mail negative with remittance to Valt, Colonie, Box 573, Utica 1, New York.

OLD WALL telephones. Working order, oak cabinets, hand crank for ringing, $5.00 each. Telephone Co., Turtle Lake, Wisc.

ILLUSTRATED album, hinges, gauge, detector, fifty stamps, two sets—all 10c. Approvals, Carnetti, 228 West 25th, New York 1.

NOW—a real sharpener. Not a grinder, but a completely different principle of sharpening. You can expertly sharpen knives, scissors, garden tools, etc. Easy to use and so useful in the home, on the farm, and in the shop that you may desire several. Only $1.00 each postpaid. Sorry, sales are limited to not more than two sharpeners per order. Arkay Company, Dept. B, 3733 Marburg Ave., Cincinnati 9, Ohio.

MICROSCOPES, prepared slides, biological stains, oculars, illuminators, mechanical stages, objectives, mounting media, parts, specialized equipment. Premium quality merchandise lowest prices anywhere. Write for free illustrated microscope catalog and price list. Benjamin Miller, 134 W. 32nd St., Room 204-HC, New York 1, N.Y.

NAZI BLITZKRIEG war merit cross. Designed by Hitler. Collectors' $3.95. Kingston, 3224-22, Seattle 99, Washington.

GANE air-flow needle increases "gas" mileage. Send car information for free trial. Gane, Dept. H, 191 E. Tremont, Pasadena 3, California.

BANDERA, TEXAS ranch. One square foot minerals. Genuine deed in your name. $4.00. Hillco, Box 71, Kerrville, Texas.

VIC'S famous Ozark wooden dancing dolls. Good item for tourist camps and gift shops. "Toofie" and "Limber Jim" hand-painted money makers. Samples $2. Vic's Hobby Shop, 605 Halliburton, Kirksville, Mo.

SURPLUS GOVT. typewriters $23.00 up. Free illustrated list full office size machines. Meshna, 580 Lynn, Malden 48, Mass.

BUY WHOLESALE 250,000 brand name products. Buy for resale or personal use. Literature free. Carter, Box 6011-HM, Chicago 80, Ill.

USE LUBRI-bars (Beeswax) for dragging surfaces, drawer slides, saws, latches, screws, flatirons, needles, thread, nails, waterproofing woodwork, etc. Large bar $1.00. Heschmann's Apiaries, Potosi, Wisconsin.

STOP POWER loss and save money. This triple wall receptacle has beryllium copper coil springs that hold plugs tight. $2.00 postpaid. U.L. approved, guaranteed. Miles, 7655 West Myrtle, Chicago 31.

FINISHED CARTOONS: Drawn to your ideas $1.00 each, by professional cartoonist, Alvin Hesselling, Potosi, Wisconsin.

YOUR NAME and address on 1,000 gummed labels only $1.00. 3 time rubber cushioned stamp 80c. Mail center of Detroit, 17587 Hull, Dept. 110, Detroit, Michigan.

MONEY-MAKING OPPORTUNITIES

MAKE MONEY addressing envelopes. Spare time. Glenway, 5713 Euclid, Cleveland 3, Ohio.

SELL-BUY Titania gems. More brilliant than diamonds. $9.75 carat wholesale. Free catalogue. Diamonite, 1404-PH, Mitchell, Oakland 1, California.

FOUNTAIN PENS. Sell to friends, stores. Two samples $1.00. Kavanagh, 607 Knickerbocker Ave., Brooklyn 21, N. Y.

FREE CATALOG: Selected home-money-making, craft, hobby, retirement-project books. Shields, Box 358-D, Mountain Home, Arkansas.

EXTRA MONEY every week. Send for free catalog. Dealer prices on watches, diamonds, home needs, jewelry, gifts, electrical appliances. Marshall Sales, 2016 Edmondson Avenue, Baltimore 23, Maryland.

PROFIT. Prestige. Publish a magazine under your own name! Only $3 per month. Sample, details, 5c. Filmar, 910 Marion, Pharr 12, Texas.

REPAIR DOLLS: Make rubber stamps learn silk screen printing invisible reweaving. Catalog "60 Ideas" free. Universal, Box 1076-H, Peoria, Illinois.

PERSONAL

RECORDISTS: Exchange talking and musical tapes internationally for education, fun, and friendship. Box 1404-V, San Francisco 1, Calif.

RECORDING FANS: Swap tapes everywhere. Make friends throughout the world. Details free. Box 1404-V, San Francisco 1, Calif.

PLASTICS

PLASTIC SHEETS, rods, tubes, etc. Free list. Plastic Supply Co., 2901 N. Grand Blvd., St. Louis 7, Mo.

PLASTIC CARVINGS, supplies, materials, free catalog. Hays Plastics, 1511 77th Ave., Oakland 21, Calif.

PRINTING—RUBBER STAMPS

YOUR NAME engraved on distinctive lifetime key tag. $1.00. Esch Enterprises, Box 322, Alhambra, California.

1000 EMBOSSED business cards, $2.95, postpaid maximum six lines. John Peper, Box 822, Chattanooga 1, Tenn.

MIMEOGRAPHING surprisingly different colors, samples, overnight service, folios. Lee's Letter, P.O. Box 417, Hicksville, New York.

NEAT, accurate rubber stamp for envelopes, parcels, checks, etc. Name, address, $1.00. Signal Manufacturers, Turnerville, N. Mex.

DAILY DOZEN Stamp. Twelve instructions for proper handling of bank and mail business on one stamp. Only $1.98 each. March, P.O. Box 134, Peru, Illinois.

RADIO—TELEVISION

ENJOY 3-color television filter screen now. Send $2.00 for your screen size. S. George, 5008 Stenton Avenue, Philadelphia 44, Pennsylvania.

REPAIR any make TV by proven simplified system. No experience necessary. Money back guarantee, $1.00 postpaid. Sentinel Electric Co., Box 2693M, Kansas City, Mo.

SCHOOLS—EDUCATIONAL—HOME STUDY

YOU CAN play the piano by ear—in one week. By the quickest, easiest short cut system in the world. Gives all tricks and pointers for playing correct bass with left hand, the main secret in playing by ear. Write Stephenson's, West Rattlesnake Drive, Missoula, Montana.

SONG WRITING—MUSIC—INSTRUMENTS

SONGPOEMS WANTED. Mail to: Tin Pan Alley, Inc., 1650 Broadway, New York 19, N.Y.

STAMPS AND COINS

AUSTRALIA: 47 all different, 10c. Illustrated Australia specialized catalog, 10c. Leslie Anderson, 68D, Seaside Heights, N.J.

ROOSEVELT GREECE, Pope Triangle, Greenland, Israel, 51 others, 5c. Approvals. Longhorn, Box 3063C, Lubbock, Texas.

FOREIGN SETS, U. S. stamps and first day covers on approval. Jackson, 301B Shields, Lewistown, Montana.

100 OLD United States stamps. Between 1861 and 1935. Only $1.00. Roush Stamps, 51 Chestnut, Mansfield, Ohio.

1500 STAMPS $1.00 on and off paper. Good variety. World wide. Many pictorials. No approvals follow. Satisfaction guaranteed. Whalen, 1455 First Ave., Oakland 6, Calif.

PARAGUAY—27 different mint stamps only 25c with approvals. Excelle Stamp Company, Box 489, Red Bank, New Jersey.

POCKET STOCK book full of popular stamps. Value $1.00, only 10c with approvals. Pot-O'-Gold Stamps, Litchfield, Conn.

FIVE-PAGE bargain list. Indianhead cent. 10c. Economy Sales Co., 156 Dean St., Mansfield 9, Mass.

FREE 25c Denmark. Enclose 6c postage to cover mailing costs. Mrs. Van Housen, RFD#1, Highland Mills, N.Y.

WANTED TO BUY

QUICKSILVER, STERLING, silver solders, precious metals. Immediate high cash payment. Write: Mercury Refiners, Norwood, Massachusetts.

WOMEN'S INTERESTS

MAKE MONEY addressing envelopes. Spare time. Glenway, 5713 Euclid, Cleveland 3, Ohio.

GOOD MONEY in weaving. Weave rugs at home for neighbors on $69.50 Union Loom. Thousands doing it. Booklet free. Union Looms, 152 Post St., Roosville, N.Y.

PROFITABLE HOME business. Make fast-selling chenille monkey trees, holiday flowers, novelties. Literature free. Velva, Bohemia 26, N. Y.

MAKE BIG money at home. Invisible reweaving pays up to $10.00 profit in an hour. Make tears, holes disappear from fabrics. Constant demand from laundries, cleaners, homes brings steady earnings. Details Free. Fabricon, Dept. AA, 8842 S. Prairie, Chicago 19, Illinois.

MAKE, SELL, artificial flowers, jewelry, novelties, Woodlibre, complete supplies. "How-to" Catalog 10c. Craftkrafts, 4511T112 Lorain, Cleveland 2, Ohio.

INVISIBLE REWEAVING. Now anyone, men or women, can learn this highly profitable trade. All the secrets revealed. A step by step course prepared by one of the nations biggest reweaving concerns. Satisfaction guaranteed. Send for free details about our weave-it-kit. Nu-Weave Products Corp., Dept. W-12, Box 367, Rockville Centre, N.Y.

WOODWORKING SUPPLIES

HARDWOOD SQUARES ¾" x ¾" x 4 foot, also smaller sizes and lengths. Shop leftovers sold reasonable. Armand A. Berard Co., 312 Maple St., Winchendon, Mass.

KILN DRIED walnut, mahogany, cherry, maple, and other hardwoods. Glued up and machined to your specifications. Send 15c stamps for new "Do-It-Yourself Hand Book"—refunded on first order. Corbett Cabinet Co., St. Mary's, Pa.

CRAFTSMAN'S 50 page Lumber Catalogue and Manual. 16 species lumber, 52 species Veneer, Knobs, Dowels, etc. 25c refundable. Mainesburg Lumber Co., Milpac Division, Covington, Penna.

DO IT yourself with Myrtlewood. Rough turned salad bowls for hobbyists. Send for price list of materials or finished products. Bustad's, Box 28, Seaside, Oregon.

KNOTTY PINE at mill cost 35c. Refundable. Brings bargain prices, suggestions. Pioneer Pine, Eliot 9, Maine.

WOODTURNERS: SEVEN beautiful designed turned clock plans, instructions, pictures. Electric clock movement price list. $1.00 postpaid. Clocks, 115-16th So., Great Falls, Montana.

DOWELS, SUPPLIES: Special introductory offer. 100 12" dowels, 10 each 10 sizes ⅛" to 1" $2.25 delivered. New catalog 25c refundable on first order. Queens Dowel House, Rosedale 22, New York.

REVOLUTIONARY NEW SELF-CONTAINED, COMPLETE SPRAY KIT MAKES PAINTING EASY!

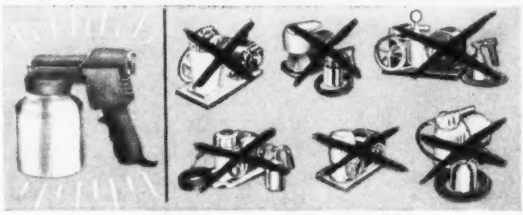
Now Spray Anything In Minutes With Amazing New *Super Jet!*

Nothing To Do But Pull The Trigger! Astonishing New Principle Requires No Air Compressor, No CO_2 Cartridges, No Tank! *Nothing Extra To Buy!*

Simply plug Super Jet into any 110 Volt A.C. electrical outlet and start spraying! The *patented* precision pumping mechanism allows you to spray from *open* or *closed* containers; spray paints, enamels, varnishes, shellacs, lacquers, water, oil, insecticides, fungicides, even water soluble fertilizers! And amazing Super Jet operates as well on a thimbleful or a barrelful of spraying liquid!

All metal Super Jet contains NO BREAKABLE PLASTIC OR GLASS parts! Lightweight and rugged, it sprays as well as professional equipment costing up to *3 times* as much! Unlike cumbersome professional equipment or impractical toy-like spray guns, you can use Super Jet every time you have *anything* to paint or spray. It's so simple to use, so easy to clean. Super Jet pays for itself!

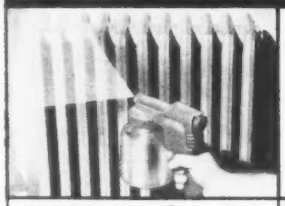
No Special Air Compressors or Extra Motors Needed!



No Spraying Experience Needed To Operate Easy-To-Use SUPER JET!

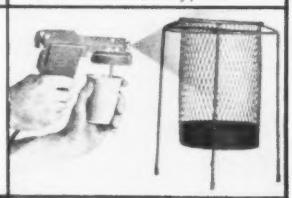
Independent laboratory tests *plus* consumer testimonials show that *Super Jet* is the most versatile spray unit on the market! Super Jet is so rugged, so efficient and economical to use that Army, Navy and Air Corps used them. Thousands in use today in homes and industry. Simple to operate, non-clogging and easy to clean, amazing new Super Jet Spray Kit saves time, work, money!

3 DIFFERENT WAYS TO SPRAY WITH SUPER JET!



AVERAGE JOBS — Aluminum jar holds enough material for average paint jobs . . . chairs, tables, shelves, refrigerators, radiators, storm windows, screens, metal furniture, etc. Also perfect for spraying insecticides, liquid fertilizers, removing wall paper, lubricating tools and machinery, etc.

SMALL JOBS — Spray direct from container! Excellent for small spray jobs; painting garden tools, toys, metal grill work, flower pots, lamps, and hobby projects. Also permits spraying deodorizers or disinfectants right from bottle! This feature saves money too. Sprays last drop of paint or spray material!



LARGE JOBS—Super Jet's revolutionary principle permits *continuous* spraying direct from large containers of spray material. Special "long-distance" tubing eliminates refilling. No expensive tanks or compressors to buy! Spray walls, floors, ceilings, gardens, lawns, etc.

AUTOMATIC FILTER!

NO MORE STRAINING!—Super Jet comes equipped with an ingenious, fine screen, metal filter that *automatically strains* paint and spray materials. Dirt, pigments, lumps, paint skin, etc. are automatically filtered out and prevented from clogging the gun!

SELF-CLEANING!

NOTHING TO TAKE APART TO CLEAN!—Super Jet cleans itself. Simply spray solvent through the gun for 20 seconds and Super Jet is clean and ready for another job . . . for a different spray material . . . or for storage! No work! No time wasted!

FREE! Mail Coupon TODAY and get *Free* 5-piece pocket Screw Driver Set.

EXTRA BONUS! Send $29.95 in full payment of your SUPER JET SPRAY KIT and receive as extra bonus tool kit pictured! Tempered steel 6 inch wrench, 7 inch pliers, screw driver blades and chuck, complete with carrying case. Not a toy!

A COMPLETE SPRAY KIT! Only $29.95-$1. a week!

- NEW SUPER JET SPRAY GUN
- POLISHED ALUMINUM JAR
- AUTOMATIC PAINT STRAINER
- 15 FT. DISTANCE TUBING
- 23 FT. NEOPRENE CORD SET
- SPARE PARTS
- WALL CHART & INSTRUCTIONS
- STEEL CARRYING CASE

PLUS Your Name in 23 KARAT GOLD written on Super Jet Carrying Case

FULLY GUARANTEED! 10 Day Free Trial *plus* 90 Day Guarantee Against Mechanical Defects.

POWER PRODUCTS, INC., 175 E. 87th St., N. Y. C.

MAIL COUPON TODAY FOR 10 DAY FREE TRIAL

POWER PRODUCTS, INC.
Super Jet Division 3-E
175 E. 87 St., New York 28, N. Y.

Please send amazing new SUPER JET SPRAY KIT. I must be completely satisfied or I may return within 10 days for full refund. I am using payment plan checked below.

☐ Enclosed is $29.95 in FULL PAYMENT including postage. Be sure to send my FREE GIFT *plus* EXTRA BONUS for full payment.

☐ SIMPLIFIED BUDGET PLAN. Enclosed is $3.00. I will pay balance of $26.95 at $1.00 per week plus postage and small credit service charge. (No credit charge if paid within 60 days.) Be sure to send my FREE GIFT! YOUR NAME will be written in *23 Karat Gold* on your kit. *Please Print Carefully.*

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

THE FIRST TILTING ARBOR JIG-SAW Ever!

LOW PRICE

At Last—Angle Cuts Are Easy!

BLADE, MOTOR and ARM TILT TOGETHER 45° TO EITHER SIDE

TABLE DOES NOT TILT —YOU WORK ON A FLAT SURFACE!

CUTS WOOD UP TO 2" THICK—also Metal, Plastics

The New History-Making

SYNCRO 2500

TILT ARBOR JIG SAW

History-making news! Syncro presents brand-new "2500" HEAVY-DUTY JIG SAW—first *ever* on which blade, motor, arm *all tilt together* 45° either side! Full 180 sq. ins. of always-level table working surface for easier, more accurate sawing. No need to hold lumber at awkward angle. Calibrated dial knob for quick, accurate setting for any angle cut. Built-in blower—20" throat clearance—patented easy blade changer—blade turns 90° any direction. Can be used without bolting to table—65 pounds of practically vibrationless tool! SUPER-POWERFUL patented Syncro reciprocating motor built-in *and* guaranteed against burn-out all during your ownership. Learn how much MORE Syncro "2500" gives you at a price lower than you will expect. See it at hardware stores—write for Free Catalog.

FREE AUTHORITATIVE 20-PAGE SANDING HANDBOOK (Includes) Syncro Catalog

NEW HEAVY-DUTY SYNCRO SANDER No. 900

Outsands all other portables for $ cost. Built-in sight-saver lamp. Removes paint, varnish. World's most powerful reciprocating sander motor patented. Automatically controlled to prevent surface scratching caused by excessive hand pressure. Low cost.

NEW HEAVY-DUTY SANDER KIT No. 900-D

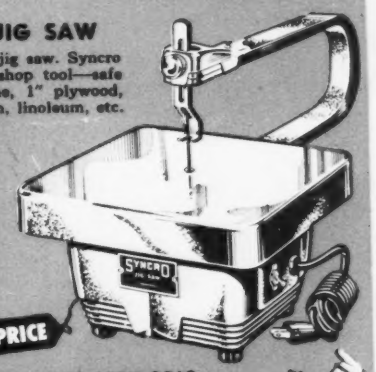
Ideal gift! No. 900 sander in sturdy metal case.

NEW FINISH SANDER KIT No. 504

Finest for vertical, overhead and finish jobs. Outsands cheaper-priced and many higher-priced portables. In metal carry case. Low Cost. See at store—send coupon!

NEW 208 SYNCRO JIG SAW

Outperforms any competing jig saw. Syncro 208 is the basic home-workshop tool—safe for all ages. Cuts 1½" pine, 1" plywood, thin metal, plastic, aluminum, linoleum, etc. —all with same blade! Full 15" throat clearance; full 100 sq. ins. working surface. Arm swings 90° for unlimited length cuts. Self-powered by patented motor guaranteed against burn-out during ownership. Low cost. See at dealers—write for Free Catalog.



MAIL COUPON

SYNCRO CORPORATION,
DEPT. 4-35, OXFORD, MICHIGAN, U.S.A.

Send Free and Postpaid authoritative Sanding Handbook and Catalog of Syncro Jig Saws and Sanders—Low Prices.

NAME .....

ST. & NO. .....

CITY ..... ZONE ..... STATE .....

Remember! LOW PRICE

MORE SYNCRO-MADE JIG SAWS HAVE BEEN SOLD THAN ANY OTHER SELF-POWERED MAKE!

Special Prices on 900-D, 504 at stores Hardware Week Only

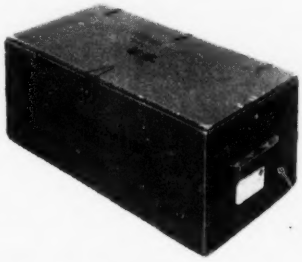
SYNCRO CORPORATION, DEPT. 4-35, OXFORD, MICHIGAN, U. S. A.

Look what FORMICA did for Mother's Old Chest and Daddy's Army Foot Locker

This chest of drawers and toy box are typical of the beautiful practical children's furniture you can improvise with the help of Formica and simple tools.

You need not limit your Formica handicraft to any one room in the house. You can use one of Formica's authentic wood grains to resurface a living room table or use one of the new high style colors to replace your worn out sink top. The same Formica used by professional craftsmen is sold in sheets at lumber and linoleum dealers.

Send for a free copy of complete step-by-step picture instructions and actual samples of Formica.



Formica Contact Bond Cement is available from your dealer where Formica sheets are sold. An ordinary rolling pin gives all the pressure you need. Toothed spreader free with cement.

DEMAND THIS CERTIFICATION

This mark certifies genuine FORMICA

REMOVE WITH SOAP AND WATER

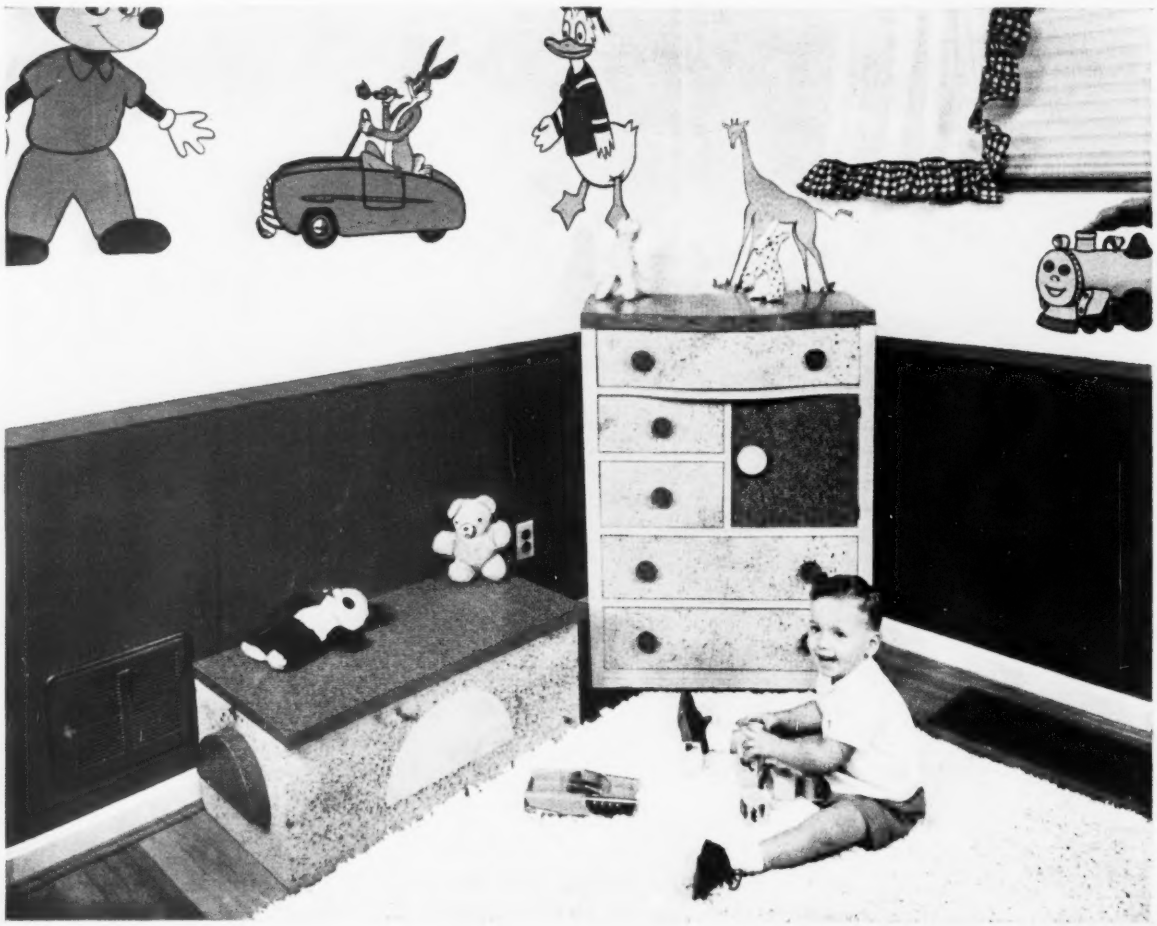
Seeing is believing. If this wash-off identification is not on the sheet, it's not FORMICA.

Beauty Bonded FORMICA

Guaranteed by Good Housekeeping

Pays in Performance

Write

THE FORMICA COMPANY

4592 Spring Grove Ave., Cincinnati 32, Ohio